

Systema Medicinale,
A
COMPLEAT SYSTEM
OF
PHYSICK,
Theorical and Practicall.

In Six Books.

Containing the Names, Definitions, Differences,
Parts affected, Signs, Causes, Prognosticks, and Va-
rious Methods of Curing all the Principal Diseases,
happening to the Bodies of

Men, Women, and Children.

Translated out of Latin into English, out of the most
Learned *John Doleus*, being a Summary of the Ancient and
Modern Way of Practice, collected chiefly from *Hippocrates*,
Galen, *Paracelsus*, *Helmont*, *Willis*, *Sylvius*, *Cartesius*, and others;
wherein both the *Galenick* and *Chymick* Methods are particular-
ly and specially Explicated and Exemplified: Brought into this
portable Volume for the Publick Good.

Whereunto is Annexed

A Prefatory Discourse concerning the Method of Stu-
dying and Practising Physick; and other Accommodations re-
lating to the same.

Written by *WILLIAM SALMON* Professor
of Physick, living at the Blew Balcony by the Ditch-side, near
Holborn-Bridge, L O N D O N.

Licensed, January 24. 1685.

R O B E R T M I D G L E Y.

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over against *Distaff-Lane* in the *Old Change*. 1686.

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THE PREFACE.

W*Hat we are to inform the Reader of here, are principally two things : the one is concerning the Original of this Work : the other concerning the method of studying and practising the Art of Physick and other Accommodations relating to the same.*

II. The Author hereof was one John Dolæus, Doctor of Physick, and a German Vertuoso, one of that Society which has published the German Ephemerides ; a Work much like our Philosophical Transactions of the Royal Society. He was also Physician to the Landgrave of Hesse, and in his own Person accompanied that Illustrious Prince, in the Famous Expedition to raise the Seige of Vienna.

III. As to the Work, we shall leave it to speak for it self, being founded upon the Divine Hippocrates, and his Interpreter Galen, and compleated from the Advancements of Paracelsus, Helmont, Sylvius, Cartesius, Willis, and their Followers ; besides the Author's own Experience, who with an exact Judgment has given you the Sum of the old and new Physick, the Galenical and Chymical Theory and Practice. So that having this one Author, you have Library, and the Sum of all you can expect from

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so many Volumes. And he has been so ample upon already some Diseases, that he has laid (as it were) the Foundations of the Art therein, and given you an Exemplar, how to do the like in others.

IV. Here is also given a Solution of the Cause in the Diseases, according to the Cartesian Principles, which I confess, I have not met with else where, in other Authors. And although you will find herein much new matter, yet nothing, but what is confirmed by the Suffrage of Great Judgments, and the most Learned Men of this latter Age.

V. The next thing which we are to instruct you in, is, The Method of studying and practising Physick, which because we cannot so well do, unless we render you an Account of the whole Art, and of its Parts, we be pleased to take it in the following Words.

VI. Physicians have divided the Art, some into five Parts, viz. Physiologia, Pathologia, Semiotica, Hygieine, and Therapeutica: Some but into four Parts, viz. Physiologia, Pathologia, Hygieine, and Therapeutica: Others but into three Parts, viz. in the Physiologicks, the Pathologicks, and the Therapeuticks, which last Division, best suits with our intended Method.

VII. $\Phi\upsilon\sigma\iota\omicron\lambda\omicron\gamma\iota\kappa\eta$, in Rerum naturalium Contemplatione Versatur; wherein is considered the Anatomy; 1. In the Structure of the Humane Body 2. In the Physical state of the same.

VIII. Anatomie, or the Structure of Man's Body is a complete description thereof, representing in proper method, both with fit Words and curious Figures, the exquisite Idea of the whole Humane Frame. The Order whereof in few Words, we have already

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up already done in a particular Treatise at the latter
end of our Synopsis Medicinæ, the latter Edi-
tion.

IX. The Physical State of the same, is considered
in the disquisition of all natural things relating to
the aforesaid Compositum, in respect of Formation,
in Structure, Composition, Preservation, Agitation,
and Affections, and Dissolution; wherein also is conside-
red, 1. The Materia Medica. 2. The Parascuolo-
gia.

X. The Materia Medica, is considered in a three-
fold respect, as it has relation to the threefold
Kingdom; viz. Vegetable, Mineral, and Animal.

XI. Botonologia, or Phytologia, is that which
teaches the Figures, Names, Kinds, Descriptions,
Differences, Places, Times, Temperature, Appropria-
tions, Virtues, Uses, Qualities, and various Prepa-
rations of Vegetables; as they have relation, 1. To
English Herbs and Plants. 2. To English Trees
and Shrubs. 3. To Exoticks, so many as we use in
Physick. The which we have already completely
performed, in a Folio Herbal now in the Press.

XII. Minerologia, is that which teaches the
Names, Kinds, Choice, Growth, Virtues, Use, Qua-
lities, and various Preparations of all Mineral Bo-
dies, viz. of Earth, Stones, Salts, Sulphurs, Excre-
ments of Metals, Semi-metals, and Metals.

XIII. Zoologia, is that which teaches the Icon,
Names, Kinds, Descriptions, Place, Virtues, Uses,
Qualities, and Preparations of all Kinds of Ani-
mals, viz. of Birds, Beasts, Serpents, Fishes, and
Insects.

XIV. The Parascuologia, is considered as it has
A 4 relation

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relation, 1. To the Preparation of Medicines, 2. To the Medical Store.

XV. The Preparation, is that which teaches the various ways of fitting, preparing, and making use of Medicaments, according to the Galenick, Chymick, and Rational Methods, and that from the whole Materia Medica, whether Vegetable, Mineral, or Animal.

XVI. The Galenick Method, teaches the way and Preparation of all sorts of Medicaments from the whole Materia Medica, which are, I. Internal, as, 1. Infusions. 2. Decoctions. 3. Emulsions. 4. Symplics. 5. Juleps. 6. Labachs. 7. Quiddonies. 8. Preserves. 9. Conserves. 10. Sugars. 11. Pouders. 12. Electuaries. 13. Pills. 14. Trochyscs. II. External, as, 1. Lotions. 2. Oyls. 3. Breceps. 4. Oyntments. 5. Cercloths. 6. Emplastres. 7. Cataplasms. 8. Clysters.

XVII. Chymistry, teaches the way of the Preparation of various kinds of Medicines from the whole Materia Medica also; the chief of which are, 1. Waters distilled. 2. Spirits. 3. Oyls distilled. 4. Balsams distilled. 5. Powers. 6. Elixers. 7. Tinctures. 8. Extracts. 9. Magisteries. 10. Salts. 11. Liquors. 12. Wines. 13. Vinegars. 14. Essences. 15. Flowers. 16. Glasse. 17. Sulphurs. Of all which, both Galenick and Chymick many Examples may be seen in our Pharmacopoeia Londinensis, of late Years emitted into the World.

XVIII. The Rational Method, teaches how to prepare likewise, from the whole Materia Medica these several Forms, 1. Waters, 2. Oyls. 3. Balsams. 4. Spirits. 5. Powers. 6. Elixers.

Tincture

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2. *Medicines*. 8. *Essences*. 9. *Species*. 10. *Empla-*
sters, according to a natural and rational way,
wherein the *Virtues*, *Powers*, and *Forces* of *Me-*
dicines are intirely preserved, without Addition,
Diminution, or Alteration.

XIX. The *Pharmacologia*, or *Medical Store*,
which the *Prudence* of *Antiquity*, and *Wisdom* of
all *Ages*, has ordered to be kept in the *Apothecaries*
and *Chymists Shops*, to answer the *Exigency* of all
(*Applications*) contains the *Names*, *Number*, *Compositi-*
ons, *Preparations*, *Virtues*, *Uses*, and various *Doses*,
of certain select, approved, and experienced *Medi-*
caments; together with an *Estimate* of the *Powers*
and *Forces* of those mostly in use, which the prudent
Physician is to draw forth, and use as the nature and
Necessity of his occasion requires. The which we have
already done in Our *Pharmacopœia Londinensis*,
hitherto of the *Physiologick Part* of *Physick*; the
Pathologick follows.

XX. Παθολογική, in rerum præter naturam con-
sistit: Wherein is considered the *General Method*
of *Indications* of *Diseases*, *Diagnostick*, *Ætiolo-*
gick, and *Prognostick*.

XXI. The *Diagnosticks*, shew (not so much sim-
gularly the *Signs* of *Diseases*, as) the *Signs* of the vari-
ous *Causes*, whereby the cause may be known and un-
derstood: for if the *Disease* be known by its *Pa-*
thognomick Signs, yet if the *Cause* be not under-
stood, the *Cure* will be very doubtfully attempted;
for the *Medicaments* for removing of the *Di-*
ease, must be contempered, according to the *Na-*
ture, *Variety*, and *Mixture* of *Causes* effecting.

XXII. The *Ætiologicks*, shew the several and
various

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relation, 1. To the Preparation of Medicines, 2. To the Medical Store.

XV. The Preparation, is that which teaches various ways of fitting, preparing, and making

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4. Spirits. 5. Powers. 6. Elixers. Tincture

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1. Figures. 8. Essences. 9. Species. 10. Empla-
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The Preface.

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Tinctures

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7. 2. *Medures.* 8. *Essences.* 9. *Species.* 10. *Empla-*
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nal, *s, Preparations, Virtues, Uses, and various Doses,*
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how *the Medicaments for removing of the Di-*
ed *disease, must be contempered, according to the Na-*
ture, Variety, and Mixture of Causes effecting.

s. XXII. The *Aetiologicks*, shew the *several and*
various

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various Causes of Diseases, according to their several Kinds or Differences: for as one Disease may have several Causes from which it may arise, the several Kinds or Differences of it, will have different Causes from the first, either simple or mixed, according to the Symptoms and Complication of the Disease.

XXIII. *The Prognosticks, are deduced from the Symptomick Appearances of the Disease thence, according to the Strength and Vigor of the Sick, the Vehemency or Remissness of the Symptoms, and their various alterations or changes, the Physician is made able to judge, whether the Disease may be curable or not, or probably may end in Life or Death. The Therapeuticks, now remain to be considered.*

XXIV. Θεραπευτική, medendi rationem Dicitur. Chyrurgiâ, Pharmaciâque præscribit. *Here is considered the General Indications of Cure, Diætick, Chyurgick, and Pharmaick.*

XXV. Hygieine, or the Diætetic Cure, is considered in a two-fold respect. 1. As it has relation to the preservation of Health, or prevention of Diseases, consisting in the true Knowledge and right Government of the Body in respect to the six Natural things. 2. As it has relation to the Government and Diet of the diseased.

XXVI. Chyrurgia, or Chyrurgery, teaches the Names, Numbers, Kinds, Parts affected, Signs, Causes, Judgments, and particular ways of Curing all external Diseases; As 1. Tumors. 2. Wounds. 3. Ulcers. 4. Fractures. 5. And Dislocations. Together with the Names, Numbers, Descriptions

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shall several Uses of all the Chyrurgick Instruments; and the Method of Pollicination or Embalming, whether Ancient, as the Egyptian and Jewish; Modern, as the Greek, Roman, or English.

XXVII. Pharmaica, the Pharmaicks commonly called properly with us called Physick, is that which teaches us the Names, Kinds, Parts affected, Signs, Causes, Judgments, and various ways of Curing of Internal Diseases, whether General or Particular, of acute or Chronick, happening to the Bodies of Men, Women, and Children.

XXVIII. Thus in short have we run through the whole Art of Physick in its principal Branches (to descend to particulars in this place we cannot) wherein you must note, that the NAMES. 1. Of the Principal Parts of Man's Body. 2. Of Diseases. 3. Of Herbs, Plants and Trees. 4. Of Minerals, as Metals, Semi-metals, Stones, and Earths. 5. Of Animals, as Birds, Beasts, Serpents, Fishes, and Insects, are to be known, learned, and understood in Greek, Latin, and English, that the Industrious Artist may be the more ready for the reading and understanding of Authors: And withal, that he be knowing and skilful, in all the Icons or Figures used in the Medical Learning, whether Anatomical, Chyrurgical, Phytological, Zoological, or Chymical, that he may not be imposed upon by any Medicaster pretending to our Art.

XXIX. In order therefore for the more Exquisite and Honourable Study and Practice of these Arts, the young Physician, ought First, to be thoroughly learned in all the preceding Branches of the same, and that he might be the more absolutely accomplished

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complished for it, he ought to revolve Antiquity, know
examine and scrutinize the various Judgments, will
Observations of the most Eminent Physicians, vere
daily read all the more approvable Authors reason
tant. fore-

XXX. Secondly, He ought to draw up the part
of his diffused Knowledge into a short and succ
Method, that he may not only know how to apply
cepts to his Practice; but also be able to justify
his Practice by the Precepts of the Art, and
Opinions of the Great Masters of the same; not
getting all this while, to make use of his own
ment and Reason, in all his practical Conclusions.

XXXI. Thirdly, He ought to be knowing
all manner of Drugs, that he may not only tell
their Names are, but be judge of their Goodne
Virtues and Uses, and be able to make a choice
the best, if necessitated thereto.

XXXII. Fourthly, He ought also to spend
some time, at least a year or two, with an Apothecary
that he may not only dispence the Composition
Medicines, but be versed in their Preparations
Mechanick mixtures, which though those things
at first seem below the Dignity of a Physician,
this he is to understand, that he shall never be
able Artist without it.

XXXIII. Fifthly, He ought to live at least
year with some able Chymist, and go through an
Course of Chymistry; not that it is requisite for
to make and prepare every Medicine, which Chymist
have taught in their Books; but, that he ought
ally to go through every kind of Process, and per
form the operation with his own hand. And th

The Preface.

ity knowing how to make one Medicine of that kind,
nts will know how to make an hundred of the same ;
s, hereby he will conceive the Mystery, Nature and
rs reason of the Art, and from thence, as out of a
ore-house, fetch the Preparation of any Medica-
be sent whatsoever, at pleasure.

XXXIV. Sixthly, He ought not only to read
y Anatomy constantly, but also frequently to see Dis-
justitions; and thence, partly by his Reading, partly
ndom his own Observations, to draw up a kind of Ana-
t omical Scheme, that the complete Idea of the whole
Human Frame, being constantly in his Mind, he
ns. y be the more able to contemplate Diseases, search
ing their hidden Causes, and to prepare fit and pro-
l wr Medicaments for the Cure.

XXXV. Seventhly, He ought constantly in
ice Summer time to Herbarize, that he may at
ht know the Herb and its kind, from the pre-
space of which, the Virtues, Natures, and Qualities
eacereof will present themselves to his Mind, where-
ion the Power and Energie of the Art will (as it
s are) by degrees be implanted in his Soul.

XXXVI. Eighthly, He ought to spend two
s m. years at least with a Practical Chyrurgion, that he
bety see, and withal help to perform all the Manual
erations of Chyrurgery; and that if possible in an
east hospital, where he will constantly see great Varie-
mp. Without this Knowledge, let him pretend what
r his will, and use all the Industry he can, he will be
mist an imperfect Master of his Art.

XXXVII. Ninthly, These things being done,
ach. pefore ever he adventures to give or prescribe any
the Medicament of his own, he ought to live two or
three

The Preface.

three years with some eminent Physician, an able man of Practice, where he is to visit the Patient, observe the Disease, and its Symptoms, scrutinized to the Cause, take notice of his Master's Prescriptions, and make Observations of the Effects of each Dose, how it wrought, and the Operation upon the Constitution; all which things he ought constantly to commit to writing, that by revolving the same in his mind (when he comes to practise) he may be able to do like. Hitherto of the Method of Studying, nothing coming to the knowledge of the Art of Physick, now only remains to give Directions to a young Physician, how he should manage the Practice thereof.

XXXVIII. As to the Practice of Physick, of which is to be understood, that the Learned Physician must not so much Levity, as to try all sorts of Medure, which Physicians have in their Books prescribed; nor often to change their Medicaments; he who shall do so, shall never know the true worth of Sea-bone, but be always to seek. Whereas if he be a man of good Judgment, and able to make a Choice, he may by his Diligence in Reading be able to select out a select number of the most approvable, which may answer all the Operations and Intentions of Physick, and absolve the whole Practice of the same.

XXXIX. With the constant use of these he may get Credit, and in a short time be able to know not only, whatever they will do; whereas otherwise, he would never be able to judge or know the true Worth of a Medicament.

XL. But whereas things are best taught by example

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*ample, We will here exhibit a Catalogue of such as
tic constantly make use of in our Practice, and have
ized their Effects for more than twenty years last
rist. And these we always keep ready prepared by
er, being in a manner the very substance of what
nt, practise withal, except some few Arcana, which
ntly are not yet willing to discover to the World:
ameir Compositions, Preparations, Virtues, Uses,
dof Doses, you may find at large in the Fifth E-
tion of Our Polygraphice, lately emitted to the
ck world.*

*g XLI. These Medicines are wholly salubrious,
the beneficial to the Body, of a small price, and
mirable against the Diseases specified. They will
k, of excellent use for all Travellers, Soldiers,
nn-men, and such like, who cannot attend upon a
diure, but are forced to go about their Business.*

*cri XLII. These things may be taken to Sea with
e m, where they will stand them in great stead, in
of Sea-sicknesses, sickly Seasons, Agues, Scurvies,
he res, Gouts, Poysons, Fluxes, Feavers, Calen-
Ches, and other Diseases, commonly attending, Ar-
o des, Camps, and such as go to Sea: By the use
with these things, especially in Scurvies, Dropsies,
ions uts, Rheumatisms, Agues, Feavers, Calentures,
of xes, Worms, Intollerable Pains, &c. almost in-
dible Cures have been done. The like to this
bet any Physician do for himself, if this pleases
ow not.*

*se, XLIII. Lastly, In the following Catalogue we
e Wee given you the Value of each Medicine by
Ounce; all which are firm and durable, so
by it neither the Sea, Season of the Year, nor Age
will*

The Preface.

will spoyl them, if they be kept close; and
may be all had (excepting the two last) faith
prepared by the Author, at his House in Lon
To the Giver of every good thing and Fountai
Mercy, be given all Praise, Honour, Glory,
Thanksgiving; and to him (Reader) thou art
mended by

From my House at the Blew
Balcony, by the Ditch-
side, near Holborn-
Bridge. 10. January,
168 $\frac{1}{2}$.

Thy faithful Friend

and Servant

WILLIAM SALMON.

Catalogue

Catalogus Medicamentorum.

Price per Ounce.

l. s. d.

A Qua Regulata	0: 1: 0
Aqua Bezoartica	0: 0: 6
Catharticum Argenteum	0: 5: 0
Tinctura Corallorum	0: 2: 6
Tinctura Stomachica	0: 2: 0
Tinctura Bezoartica	0: 0: 6
Tinctura Hysterica	0: 0: 8
Tinctura Cathartica	0: 0: 6
Tinctura Antimonii	0: 5: 0
2. Guttæ Vitæ	0: 2: 6
10. Tinctura Martis	0: 2: 6
1. Spiritus Nitri Alchoolizatus	0: 2: 6
3. Spiritus Anodynus	0: 1: 0
4. Spiritus Aperiens	0: 1: 0
5. Spiritus Antiasthmaticus	0: 2: 0
5. Spiritus Cosmeticus	0: 1: 0
7. Potestates Cornu Cervi	0: 2: 6
3. Potestates Baccarum Juniperi	0: 1: 0
0. Potestates Carui	0: 1: 0
0. Potestates Caryophyllorum	0: 2: 0
1. Potestates Lavendulæ	0: 1: 0
2. Potestates Limonium	0: 1: 0
alo 1. Potestates Mercurii	0: 5: 0
4. Potestates Pulegii	0: 2: 0
5. Potestates Rosmarini	0: 1: 6
6. Potestates Succini	0: 1: 0

Catalogus Medicamentorum.

Price per ounce

l. s.

27. Potestates Terebinthinæ	0 : 0
28. Elixir Proprietatis	0 : 2
29. Oleum Sulphuris	0 : 1
30. Oleum Salis Tartari	0 : 0
31. Syrupus Elaterii	0 : 0
32. Tabulæ Emeticæ	0 : 2
33. Sal Mirabile	0 : 6
34. Sal Vitriolatum	0 : 1
35. Aurum Vitæ	2 : 10
36. Calomelanos	0 : 2
37. Arcanum Corallinum	0 : 6
38. Pulvis Regalis	0 : 5
39. Pulvis Antifebriciticus	0 : 2
40. Pulvis Bezoarticus	0 : 10
41. Hercules noster	0 : 8
42. Antidotus nostra	0 : 1
43. Theriaca Londinensis nostra	0 : 4
44. Laudanum Volatile nostrum	0 : 16
45. Extractum Pectorale	0 : 0
46. Balsamum Sulphuris nostrum	0 : 2
47. Balsamum Amicum nostrum	0 : 1
48. Balsamum Arthriticum	0 : 1
49. Balsamum Ophthalmicum	0 : 2
50. Pilulæ Panchymagogæ	0 : 8
51. Pilulæ familias nostræ	0 : 5
52. Balsamum de Chili	0 : 1

T H C

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Medicaments; but it ought to be constantly and in a due Dose, and with those advantages it may not nauseate the Stomach: So taken performs more than any other Natural Balsa cleanses the whole Body of all Impurities, refines the whole Mass of Blood, heals all Bruises, Wounds, Ulcers, or Excoriations, whether in the Bowels, or Lungs; and otherwise restores a decayed Nature to a Miracle, carrying off Fæculencies by Urine and Stool.

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WILLIAM SALMON

A
COMPLETE SYSTEM
OF
PHYSICK
Theoretical and Practical.

BOOK I.
Containing the Diseases and Distempers of the HEAD.

CHAP. I.

Of the Pains of the Head, or Head-Ach.

§. I.

MAN, the noblest of all Creatures, and most divinely made, is, not without Reason, and very elegantly called the *Epitome* of the *Whole World*, and the *Microcosm*, or, the *Whole World in Little*: And all other Things under the Sun; particularly Diseases may be best

explained by contemplating Man, and the Curiousness and Nobleness of his Parts. And as those who take a View of a Country, first go to the *Metropolis*; and as *Chap. I.* in the Title signifies no more than the *first Head*; so may this serve to intimate to us that we should begin our Discourse with the *Head*, which is the principal Part of the *Microcosm*, or the *Metropolis* of the

Little World. And as *Virgil* began with *Jove*; so we begin this Treatise of ours from the *Head*, which was anciently reckoned Sacred, and by which they used to Swear with the same veneration as by *Jove* himself. And besides this, if we consider the Violence and Extremity of the Disease we are now to treat of, and the frequent Visits it makes, we shall find Cause to begin with this cruel Monster first; For, as *Willis* says, there is no Part of the Body more obnoxious to Diseases and Pains than the *Head*; Inasmuch that it passes for a common sign of the best Constitution in any, if it can be said of them, Their *Heads* never ake. Which Observation is back'd with this Reason; Because the *Head* is furnished with a great many nervous Parts, those Parts are more easily hurt. For the Nerves, the nervous Fibres, and Membranes; as, the two *Meninges* that environ the Brain, the Coats of the Nerves, the *Pericranium*, the *Periosteum*, the *Panniculus carnosus* of the Muscles, are all Parts of the greatest Sensation. Likewise in the Brain several Excrements are generated, which if they increase, and are not in due time discharged; it must needs follow, that those nervous Fibres must be irritated and vellicated by these disproportionate Particles of the Excrements, and so the *Head* be affected. Now as the *Head* has exterior and interior Parts; so in this Case we'll likewise follow the same Order of Nature, which is the best Teacher and Guide. For seeing this Pain in the *Head* is lodged in the *Meninges*, many excellent Authors, who are of the same Opinion, and follow the same Methods with us, usually treat of this Subject we are now upon, before any

other Distemper of the *Head* under which they comprehend *cephalalgia*, *Cephalæa*, and *crania*.

§. 2.

Definition and Division

BUT because a Definition and principal Business, we begin with that first; It is a Sensation in the *Head*, caused by Dissolution of Continuity. The Division follows: That Pain is not in form, but sometimes externally in times internal. If it is external (when the Distemper has gone further than betwixt the Skin and the *Flesh*) then the Hair on the *Head* as Leaves from the Tree in Autumn; and the Pain is violent; Which never happens, unless the Pain be inward, for the Pain is much greater, because the Membranes that compass the Brain are very sensible. If it be an old Pain, it often returns, continues long, seizes the whole *Head*, or the greater Part of it, then it is called *cephalæa*; but if it is in one side, then we call it an *Hemicrania*, which comes from some slight Occasion, as a Fever, or the Sun-Burn, or hard drinking, or some other Cause, it is called a *Cephalalgia*, which amongst the Galenists is divided, viz. *Pituitous*, *Bilious*, *Sanguineous*, and *Melancholic*; of which we shall speak hereafter.

§. 3. Part affected

SOME take the Substance of the Brain for the Subject of this Disease, some the Ventricles, some the *Pericranium*, some few the

Head-ache, others the Animal Spirits ; and some , the Stomach ; because when the *Meninges* of the Brain are out of Order , the Stomach also takes. But we reckon the Subject to be the nervous Parts of the Head ; for they have the greatest Sensation ; and hence it is, that Pains are felt by the Contraction and Twitching of those Fibres in which the Animal Spirits are lodged ; and ; for by how much the more acute those Particles are which lie in those Parts , by so much the more violent is the Pain ; especially in the smallest Veins which consist of slender Filaments, and are therefore more easily puff'd up by the Spirits and kept stretched out, and are likewise apter to be moved and vellicated by the sharp Matter. We are induced to believe and declare with *Willis* and *Wedelius*, those two great Lights in Physick , that the Part affected is not the Substance of the Brain , because it has no sensitive Fibres ; Which we now to be true by our own Experience ; for we have seen an Instance of this in a Soldier, the Substance of whose Brain the Surgeon rob'd with his Instrument, and yet without the least pain to the Patient : When on the other Hand, a Nerve or nervous Membrane be prick'd or wounded, great Pain or spasmodic Motions arise. There is also this Reason, that purely by cutting a Nerve the Sense and Motion is taken away presently : Hence one may naturally conclude, that the Pain arises from these nervous Parts : when on the other Hand, there is less Pain in those Parts that are not nervous ; though they be full of Veins and Arteries , as one may see in the Lungs , Liver and Spleen , in

which there is but little Sense of Pain.

§. 4. Signs.

THE Signs are now to be considered. Some shew the Malady is just a coming, others that it is present. Much may be learnt by the Continuance or Intermision of the Disease, and the Hereditary Disposition of the Patient: It will also be of no small Moment to consider whether the Part be affected primarily, or secondarily, and by Communication. Now the proper Actions of the *Viscera* hurt, will shew what Communication there is between the Head and Part affected. Whither *Craio* l. 4. alludes, (whom yet we do not altogether follow) *Head-achs*, says he, *come through the Consent of the Stomach, and then usually the fore-Part of the Head akes ; but when the Pain is from the Womb , then the hind-Part akes.*

The Pain in the Head is sometimes pungent, tensive, stupifying, short and sometimes long, according as the Excrements of the Serum and Blood are sulphureous, saline, sharp, or acid, and as the Force of those Humors upon the Brain is stronger, or more violent. This Pain, as we said before, is sometimes tensive, sometimes fixt and piercing, by reason of some sale Particles lodg'd in the nervous Fibres ; sometimes it is pulsative or thumping, through the too vigorous Fermentation of the Blood rushing violently into the Head through the *Carotides* ; sometimes it is pungent or pricking, because of some sharp Particles sticking in the Membranes. If it comes from too much Blood, it will be indicated by the Constipation, Ac,

Climate, Spring Season, Way and Manner of living, &c. with such other things as usually increase the Blood. Sometimes this Pain is *Periodical*, so that some have it every day; and continuing for some hours. Others are afflicted once or twice in a month, some only in three months, six months, a year; of which 'tis needless to give any Examples.

§. 5. Cause.

NOW that we have done with the *Signs* we proceed to the *Cause*; which according to the Ancients consists sometimes in a *cold pituitous Matter*, from which comes a dull heavy Pain. When the Pain is violent and makes sudden Invasions, with manifest Signs of Heat, that, they say proceeds from *Choler*. They also accuse the sanguineous adust Humors and Vapors flying up to the Head (believe them, who will for me) of causing this violent Pain.

§. 6.

THE *Paracelsists* sometimes reckon the Cause to be *some Accidental Digestion of the Blood*; sometimes the *Resolution of Tartar in the Stomach*, and sometimes *Obstruction*.

§. 7.

THE famous *Cathenius*, according to his own Principles, endeavors to explain the Causes of this Disease by the two Sales *Acids* and *Alkali's*, thinking that it happens either when too much *Alkali* is got into the Blood and makes it ferment; or too much *Acid* and makes it coagulate.

§. 8.

Helmont with great Dence impures the the Stomach and Spleen; happens, says he, that some of the Nature of Spirit of the Artery of the Stomach, it self with the Spermatik No ment of the Artery, does in of time cause incurable *Vertigo* Head-achs.

§. 9.

BUT *Cullis* is of another nion, thinking that the of the Head does arise any about the nervous Parts of Head, and that the true Reason because the Animal Spirits upon the least occasion separate and dispersed, they thereby the containing Bodies to be gated and drawn together, cause a Pain. And adds that some disproportionate eles rushing in amongst the Spirits, or their Vessels there into the Pores of the Fibres put the Animal Spirits into sion. And for this Reason vides this Pain in the Head incidental or Occasional, and *Habitual*. The Occasional very easily from excessive drinking, go dising, basking in the Sun, much Exercise.

And he says, this Head-ach ally happens in Fevers, because Blood by too much ferment swells and dilates the Membr which it passes through. Nor he excuse the Serum and because they may get into Membranes, and after that and irritate the nervous

at the *Habitual* Pain in the Head, which is continually troublesome, he has a weak Constitution of the part affected, whereupon the morbid matter becomes more readily and easily accumulated. To this he refers an Hereditary *Head-Ach*, which is propagated from the Parents, and imputes it to the bad conformation of the Integuments of the Head and Brain, which being thicker than they ought to be, and thereby unfit for the Humors and Vapors to pass through; those vitious Humors do either blow up and vellicate the *Meninges*, *Pericranium* and other sensible Parts, and so cause this great Pain. This worthy Author takes the *Morbific Matter* to be either the *Blood* or *Serum*, or the Nutritious or Nervous juice; that is, according as the Humors degenerating from their right *Cra-ter*, become tainted with sulphureous, saline, sharp, acid, or bilious excrements, they twitch the nervous Fibres, and so cause either a smart, piercing, beating, pricking, heavy, short or longer Pain.

§. 10.

Sylvius who makes the Cause, as others do, the *Dissolution of Continuity*, says it comes from a sharp Humor or Vapor twitching the nervous Fibres, whether it be the Pancreatic Juice, or Choler, or Vapors compos'd of both these Humors; or it be *Serum* or *Blood*, all which are naturally apt to cause this Pain.

§. 11.

Let us now hear what *Cartesius* says, who seeks for the Cause of this Malady after his usual man-

ner, in Particles of disproportionate Figures which deprave the *Cra-ter* of the Blood, blaming the violent motion of the sharp Spirits and thin arterious Blood which is too bilious and viscous, or whilst these sharp Spirits are driven through the Arteries to the Head, they twitch, gnaw, rend and prick the Filaments and Coats, or *Meninges* of the Brain, and so hurt the Pores which they would break through, that are not of the same Figure and Magnitude with them, and by making Breaches do at last dissolve the *Continuum*; from whence Head-Achs do necessarily come, all Pain according to the *Cartesians* arising from Obstruction. The Result of all which is this, That the Acrimony, Saltness and Sharpness of any Humor is able of it self to bring this Pain, always supposing a subtil Matter; that is, the pricking Pain arises from Salt, the cutting from an Acid, the dozing from an insipid Flegm, the distending from Vapors, the beating from pricking Particles that are extravasated upon the Artery.

§. 12.

But now to cast in my own Mite; I think with others that the immediate Cause of this sad Pain is the *Solution of Continuity*, and the mediate Cause I take to be some salt, sharp, austere, or sulphureous Particles in the mass of Blood and Animal Spirits, which carried, beyond their Sphere, to the nervous or membranous Parts, by their pinching and twitching cause this violent Pain. But it seems to me very immaterial by what Names you call this peccant Matter (for the Controverſie lies more in them

than in the thing it self) viz. whether you call it the Recrements, or bilious Particles, or acute, or sulphureous, oily, tenacious, or very volatile, or saline, &c. For it is certain that the Animal Spirits being parted from one another by these, cause the contiguous Bodies to be constringed and pinched together, which occasions a certain unpleasant sensation. For these sharp, salt, sulphureous and acid Particles, from whence soever they come either corrode, or being lodg'd deeper and deeper in the Fibres rend them with their sharp Spikes and make a Division: As it sometimes happens in Fevers, that through the too quick Motion of Blood, however occasion'd, and running violently into the *Meninges* or Fibres, which know not how to give way, this dolorous Sensation presently arises. In like manner sometimes the Blood is a Hindrance to it self, when it is heaped together in a great quantity, and being driven on by other Blood that follows it, forces its Passage, through little holes and fissures (by Dividing, breaking, or opening the Mouths of the Vessels) into the neighbouring Parts; which is so ancient a Truth that *Hippocrates* takes notice of it, when he says that Bleeding at the Nose cures the most violent Pain in the Head. So that there are many Causes of this Distemper, according to that common Axiom in Logic, The same Effect may proceed from divers Causes. We read in our German *Ephemerides*, An. I. Obs. 69. that there were found eight Ounces of yellow *Serum* in the fore-Ventricles of the Brain of one that was troubled with a heavy Pain in his Forehead. So the Excellent *de Graaf*

in the same *Ephemerides* says, which found a great Quantity of Water, under the *Pia Meninx*, the *Carotides* grown hard, of that died of such a Distemper. This is also plain from the same *Ephemerides*, An. 10. Obs. 50. that Worms cause this Pain. As to the *crania*, I am of Opinion, that sharp and vitious Particles are carried with the Blood through the *Carotides* and jugular Arteries into the *Cerebellum*, by reason of a lent Turgescency preceeding, seeing those Arteries are divided into two Branches, and that is sometimes an easier Passage through one than the other, where ever the Way is most open, the peccant Matter rushes with great Force. Nor do I at all doubt but that where the oily and sulphureous Particles predominate, which they be lodged in the *Hypochondria*, or be there precipitated, or in any other *Viscera*, if too great a Fermentation or Defflagration occurs, they are hurried to the Membranes of the Head, and if they find it too narrow, strait, unproportionate Passages and Pipes which they cannot enter, they try to force a Passage like this, thereby cause a Pain. It is usually about the back Part of the Head, because there are the most Arteries, and consequently if the greatest Discharge of the peccant Humors. It usually reaches to the Neck, because the Matter extruded in the hind-Part of the Head falls down by its own Gravity into the Spinal Marrow through the fourth Ventricle of the Brain. As it is remitting, because all the Blood is not disposed alike, so that sometimes it comes sharp, anon it leaves off again. Thus much of the several Causes of the Head-Ach, and

which whoever shall take upon
him to dispute will find a difficult
task, as the famous *Willis* towards
the Beginning of the first Chapter
of his Book of the Head-Ach doth
acknowledge; where he says, that
the Causes of this Disease are so ab-
use and intricate, that it is no easie
matter to attain to its true *Di-
agnosis* and Cure. No less Difficulty
attends the *Prognosis* which we are
now about to inspect.

§. 13. *Prognostick.*

AN old and inveterate Ach, that
comes (as many think) from
an old Matter, is very hard to
be cured, and especially in old Men.
constant excruciating Pain, and
which takes away Rest is very dan-
gerous and formidable. If it be
without Intermission, and Periodi-
cal, and very violent, and is ac-
companied with a *Vertigo* and other
distempers; then it threatens with
Deafness, Blindness, Phrensy, Epi-
lepsy, Apoplexy, Palsy, Spasms, &c.
If the Distension of the Nerves be a
Concomitant of this Distemper, it
denotes a Sign of very great Danger. In
like manner, when it is accompa-
nied with the Pox or Hypochon-
driacal Passion and often affects the
Patient, it is very hard to be cured,
if not altogether incurable. And
there's but little Hope when the
Pain comes from bilious *Serum* ex-
travasated near the *Meninges*, or
from an Irruption of Blood, which
is commonly call'd an *ApoSTEM.*
Or, when it comes from a bony
Hardness of the Carotid Arteries,
as *Regnerus de Graaf* observed: as
also that which is caused by Worms,
which yet our German *Ephemerides*
say has been cured by driving the
Animal out through the Ear. And

that is incurable also which comes
from little Stones that are bred in
the Brain near the *Meninges*, as ap-
pears by the foresaid *Ephemerides*
An. 8. Obs. 48. Whoever being well
are suddenly seiz'd with Pain in
the Head, and become forthwith
dumb, and rattle, they die within
seven Days except a Fever follow,
as *Hippocrates* says *l. 6. Aph. 51.*
When the Head is pain'd in some
Part, or allabout, and Pus, Water
or Blood issues out at the Nostrils,
mouth or Ears, it is a Sign the
worst is over, as *Hippocrates* again
witnesseth *S. 5. Aph. 10.* If the Sum-
mer be dry and have frequent
North Winds, and the Autumn be
rainy and have a South-Wind, then
the Head-Ach afflicts in the Winter,
as our foresaid experienc'd *Hippo-
crates l. 3. Aph. 13.* again tells us.
When the Head-Ach does not be-
gin the Disease, it is a certain Sign
of a future *Crisis* by Vomit or Bleed-
ing at the Nose, and that no
Cure should be attempted, lest the
Bleeding be hindred, which is a
Benefit of Nature, and will either
Cure, or at least (as Mariners to
save the Ship throw the Goods
overboard in a Storm) will give
Ease to the Disease. That Head-
Ach is easily cured which proceeds
from Eating, Drinking, Lying in
the Sun, immoderate Exercise,
and that which is not too deep
rooted and become habitual. If
much watry Humor be extrava-
sated into the Brain, and also
become corrosive, it usually cau-
ses a Head-Ach which proves
mortal.

The Pain in the Head, in an
acute Fever, with thin white Urin,
is dangerous; for it is an Argu-
ment (as is vulgarly held) of vi-
tious Matter hurried up to those

sensible Parts, the *Meninges* of the Brain. When the Urin of those that are feverish is muddy, like that of Cattle, they either have the Head-Ach, or it is nigh at hand, as *Hippocrates* says *l. 4. Aph. 70.* If this Pain come from Cholera or volatile Salt, the Patient is in Danger of a Phrensy; if from Melancholy, to run mad; if from a watry Humor or Blood, to fall into an Apoplexy.

§. 14. *Dietetic Cure.*

From what has been said of the *Causes*, it will be easie for any Man to know how the Body is to be order'd in Respect of the *Six Non-Naturals*; for that which increases the *Causes* is above all things to be avoided.

Therefore in the first place, Let the *Air* be temperate, thin and pure either by Art, or Change of Climate; but avoid a cold Air, for it hurts the Brain, neither must it be too hot; but always observe a *Medium*, for all suddain Changes are dangerous. It is very bad to lie down or walk bare-head in the Night-Time and moon-shine.

Let the *Meat* be of good Nourishment and of easie Concoction, as Wild-Fowl, Tullers, Capons, Veal, &c. Roast-meat is better for some Constitutions than boil'd; Poach'd Eggs, Water-Gruel, and Barley Broth are good. We advise the Patient by all means to forbear sharp, salt things, for they are naught for the Nerves; also Meats dryed in the Smoak, and those that are windy; all Garden Fruit, as Pot-Herbs, Radishes, Smallage, Mustard, Garlick, and whatever else is commonly found to be

prejudicial to the Brain: And which Milk-meats may be rectified for *Hippocrates* long since in giving of Milk to those that are troubled with the Head-Ach.

Let the *Drink* be Small and that but little; however Draught mixt with Cephalicks sometimes be allowed. What proceeds from a hot Cause, Iron Waters, as of the *Spania*, are good, because they allay the Heat of the decoloratory Instrum, of the Blood, and wash off the crements, and also do temper rough excrementitious tart and nitro-sulphureous Salts, and cleanse 'em by Urin.

Woods of Sassafras and *Gum*, and Peony Roots do well in Diet Drink. And care must be us'd that no Darn be boil'd in the Patients Beer.

Let the *Motion* and *Exercise* be moderate, for too great Exercise through which the thin and ho Particles of the Blood are driven from the inward to the outward Parts, deprives the *Viscera* of their natural Ferment, and fills all the Parts of the Body with several crudities; so that the Brain and *Glandula Nervosum* are supplied with a rigorous Juice, by which means the sensible Parts are easily vellicated.

Let the *Sleeping* and *Watching* be moderate, and let the Sick Person sleep with his Head high and uncovered; and not lie down under a Walnut-Tree, for that will cause Head-Ach.

Lastly, the *Excreta* and *Retenela* as Suppression of Critical Sweats, Sneezings stop't, immoderate Venery, the stoppage or too much flowing of the Terms, the Lock or Purgation after Child-Birth, and the Hemorrhoids (which distemper

Am natural Heat and hinder Con-
e reed on, strock the mass of Blood
nce fr several unagreeable Particles,
that are occasion of several Diseases
=Ach. Symptoms) sometimes are the
small use of this Disease, and therefore
howe to be avoided.

malicks Amongst the *Passions of the Mind*
Wh reckon'd Anger, Fright, and
ause, like; being such as enrage the
e Spar mal Spirits, and offend the
allay ves, which easily cause a Head-
nstru and an irregular Heat in the
off the od. And this is the Reason
empe in such Passions we may
tara and see the Arteries of the
and temples beat.

15. *Pharmaceutic Cure.*

N E now proceed to the *Phar-*
macetic Part. The An-
nte, and after them the Moderns,
re this Disease with the following
Exerci dicines, still observing this Di-
Exer and h tion, that a cold Head-Ach
ire dme from a cold Phlegm, a hot
outc from Choler, a sanguineous
a of m the Blood, and a Melancholic
lls all e from an adust Humor; which
veral ethod we will describe though
nd G do not approve of it, begin-
ith ang first with *Preparers*, which
ans they place in the first Rank, be-
icated use they are of Opinion that the
atching orbifick Matter should be conco-
ck Pered several Days before it can be
and adicated, which they do by these
undellowing Medicaments, viz. Syrup
ll caus Hyssop, of *Acorus* Roots, of Be-
ny, of French Lavender; Oxy-
Retemel of Squills, Betony, Marjoram,
Sweage; Decoction of *Guajacum*, with
te Vene other Cephalicks. If it come
o mrom a hotter Cause they make use
e Lock Syrup of Roses, of the two
th, roots, of the white water Lily,
disind of red Poppies. After these

they use Purgatives which they
give the Patient two or three
times, because, say they, the Hu-
mors being gradually concocted by
Purging, may the better yield to
Medicaments; for neither gross nor
thin Humors are carried off so well
by a quick Purge, and therefore
they rather chute Pills than Electua-
ries, judging them to be better for
drawing the Humors from distant
Parts. Their usual Pills are these,
Pills of Agarick, *Aleophangina*, *Co-*
chia, *Arabica*, and *ferida*. Amongst
the Electuaries, the *Indum*, *Diacatho-*
licum, *hiera*; Troches of Agarick,
Turbitih.

They mix *Purging Potions*, as
Decoctions of Senna, with Roots
of *Acorus*, Leaves of Betony, Rose-
mary, and other Cephalicks. To
the same purpose they commend
Clysters of a Decoction of Betony,
Marjoram, Flowers of Melilot, ad-
ding Honey of Roses and Salt. If
the Body be plethorick they allow
Bleeding, else, in gross, slimy and
very cold Humors they do, not
without Cause, forbid it. If the
Pain be in the hind-Part of the Head
they bleed the fore-head Vein, if it
be in other Parts they as ridiculously
chooise another Vein.

Now we come to their *Revol-*
sives, which are, Clysters, washing
the Thighs and Feet with warm
Water, Horse-Leeches applied to
the most turgent Veins about the
place aggrieved; also Blood-letting,
strong Suppositories, Ligatures; as
also hard Rubbings, Fomentations,
Sneezers, Errhines, Apophlegma-
tisms and Gargarisms, al which in
their Opinion do revel. After-
wards they give such Medicaments
as corroborate and amend the In-
temperature that is left behind,
which are to be given upon an emp-

ty Stomach and Fasting, or else the Vapors, say they, will fly up from the lower Parts : And they are these, *Diacuminum*, Treacle, Mithridate given in Betony water, *Diacorum*, *Aromaticum Rosatum*, *Diamuscum* sweet and bitter, Conserve of Marjoram, Rosemary Flowers, Betony, &c. A Decoction of *Gua-jacum*, with the Flowers of *Carduus Benedictus* they hold to be very available both in a *Cephalæa*, and *Hemicrania*. Cubebs, Musk, Amber and Cinnamon are only to be given to the Masculine Sex. They commend washing of the Head in Ley which has had Leaves of Betony and Marjoram, and Chamomil Flowers infused in it : And likewise Bathing the Head in a Decoction of Laurel Leaves, Betony and Marjoram Flowers, &c. They say it has been often found that hot Baths have wonderfully relieved the Head-Ach. Telling us also in their Writings that a Pomander made of Cinnamon, Cloves, *Stæchas*, Leaves of Bay Tree, Marjoram has sometimes given ease. It is usual with them to apply a Cerecloth of *Euphorbium* in old Head-Achs ; but it will take up too much Time to enumerate all the Medicaments they make use of in this Distemper. To be brief ; They first of all give a Clyster, after which if the Matter be slimy and tough they use Incisers or Preparers. Afterward they carry off the Humors, and hinder their coming to the Head. If there be a *Plethora* they let Blood ; after which they strengthen the Head, and purge away the Remainder of the Humour ; nor do they neglect Topicks, because the stronger the Disease is, the stronger Remedies they apply. Amongst other things they fly to their Actual and Poten-

tial Cauteries, as their last and cruel Refuge. If the Pain comes by basking in the Sun, they make a Composition of Roses and Vinegar, and also water, in which they dip a Rag and apply it to the Head, and a thousand other Ointments, Emplaisters, Cataplasms, Bags hath doting Antiquity ago invented. In removing a veterate *Cephalæa* they audaciously burn the Veins of the Temple with *Mercurialis* l. 3. c. 10. doctissime.

§. 16.

THe Paracelsists have found something more successful in curing this Distemper : Which comes from too much Blood, and cut a Vein, as *Paracelsus* this Master advises. Sometimes they cut the fore-head Vein. He holds that the Head-Ach is cured by Things and Narcoticks, Things either external or internal as Liquors of Coral, Roses, Leek, Pearls, Darnel, &c. For this Reason ; For that the angry and raging Spirits exagitating the Blood, are quieted and as it were fettered by the strength of Narcoticks. He also commends Camphore to fix Drops, with a Mixture of Oil of Musk to be drunk in Ale, or any other convenient Liquor.

The Medicines of other Physicians (as I may call them) Chymists (as I may call them) Oil of Antimony with its Alkali (or volatil Salt.) They reckon of great Vertue to be in Oil of *Gua-jacum* in strong and inveterate Head-Achs. Some Drops of Oil of Amber taken inwardly the Day, and applied outwardly,

to the Crown of the Head, wonderfully, according to them, strengthen the Brain, and dissipate of Pain. Oil of Rosemary Flow- d also, Fennel, Hyssop, Marjoram, dip ecially when 'tis put into the Head Trills, has the same Effect. They nents, e found that some Drops of the ns, ed Oil of *Olibanum*, taken in iquity Morning in a proper Vehicle, moving very good. But to set down auda the Medicaments us'd by Chy- Tempts in this Distemper would be . dor tedious.

§. 17.

Helmont, famous for the Cure have of this Pain, says, that it is successi times cured by Eating, fetch- : Whis Medicines not out of an Apo- Bloocarie's Shop, but out of a Pan- us this, but yet uses the same Method es there Cure, as he does in other Ce- He allie Distempers.

§. 18.

He excellent *Willis* aims prin- cipally at these two things in the ing of this Distemper. 1. To iritating away the Matter of the Di- as it is. 2. To root out and quite n of Move the Conjunct or Compli- nds and Cause. He judges the Morbi- with Matter to consist in acid, salt, be chureous and other Recrements, conve he Blood, *Serum* and nervous ce, which are carried to the er Rad, for the most Part, by the chem) od. He ascribes the Causes to ts Alpeors and *Effluvia's* getting out of y red *Viscera* into the Blood. All Oil of ich he thus rectifies: 1. That inver Disorders of the Blood may be ops of moved and prevented, he advi- wardly the Patient to bleed thrice, ei- rrdly, in the Arm, or Jugular Vein;

as also to apply to the Head *Oxy- rhodina's* and Epithems; and to take such Juleps, Emulsions or De- coctions as cool the Blood, and that the Body must be kept laxative. The better to fix and cool the Blood, he prescribes destilled Wa- ters, Decoctions, Electuaries, Pow- ders, and especially makes use of Mineral Crystal. If this Pain pro- ceed from a serous Matter, he en- deavours by Clysters to stop the Fluxion of that virious Humour; and afterwards to soak up that which is extravasated, he orders Blood-letting, especially in hotter Constitutions. But in cold Tem- pers he generally uses Vescicatories near the Ears, or applied to the Crown of the Head. And then, to free the Body from superfluous Se- rositities, gentle Catharticks, Diure- ticks and Diaphoreticks he reckons very proper, the Forms of all which are to be found in the Au- thor. But the choicest, and which he generally prescribes are these: A Decoction of dry'd Leaves, some- times of a Willow, sometimes of Betony, Vervain, Rosemary boiled in Spring-Water; and he mightily cries up the Verrue of the Li- quor we call *Coffee*, to be drank twice a Day to the Quantity of six Ounces.

When it seems to proceed from the *Viscera*, he usually gives Medica- ments appropriated to those Parts; as, if it comes from the Stomach, then he orders Stomachicks, as the *Elixir Proprietatis* of *Paracelsus* and of *Helmont*, Vitriol of *Mynsicht*, Sto- mach Powder of *Binkman*, &c. If it comes from the Spleen, he gives, with great Success, Chalybeats; if from the Womb Hystericks mixt with Cephalicks. When it remains after Meazles, Small Pox, Fevers

or

or Agues, and when the Blood grows vappid, and contracts a Scorbutick Dyscrasy; then he commends Antiscorbuticks and Chalybeates, first giving a gentle Purge.

In an universal Head-Ach, he says, all Cephalick Medicines which corroborate the Animal Spirits, and help all the sensitive and motive Organs in Man, are very good: as, the Tincture of Coral to twenty Drops, of Antimony, and of *Sal Armoniac*. impregnated with Amber and Coral, and Spirit of Harts-Horn with Amber to be drunk in a proper Vehicle. Nor is the use of *Millepedes* to be neglected, the expressed Juice, distilled Water and Powder of which are of singular Advantage. He usually also prescribes strengthening Plaisters; as also to apply Sinapisms and Vesicatories. He says, that Embrocation and Bathing the Head in cold Water often does Good, which the most Serene *Charles Lewis*, Elector Palatine, now dead, very successfully used. Our Author also prescribes a great deal to Salivation, Arteriotomy, and to other Things which it will not be to our Purpose more accurately to relate.

§. 19.

NOW will we see what *Sylvius* says, who to mitigate the sharp Humor and Vapor (as being the Cause of the Pain) makes use of Lenients, Demulcents and tempering Medicaments, especially the last, in Fevers, where the sharpness of the Choler abounds, adding also Anodynes and Narcotics. To take away the pain, and the beating and watchings, he orders the following Composition.

Take Water-Plantain, Lettuce
rel, of each an Ounce,
namon-water half an Ounce,
sweet Spirit of Salt half a
Syrup of *Diacodium* one
Mix them.

Amongst External Epithi-
Liniments, he persuades
the following. And first
them.

Take of Water of Betony
ces, Rose-water one Ounce
negar of Marigolds two Dr
Opium of *Thebes* half a
Mix them.

Then this Lenitive Ungue

Take of Ointment of Popl
two Drachms, *Theban Op*
a Scruple, Oil of boill
half a Drachm; Anoint
ples therewith.

§. 20.

WE are now to see
Cartes and his
ers say, who seem to be of
nion. Our Way of curing
is thus. First, in a bilious
Ach, or when many sharp, o
ticles, rude Salts or Salino
reous Recrements abound, as
vers, and other Distempers;
no Doubt, are the occasion
Solution of Unity, and of
Pain that follows; we order
letting, and other Things
alter and correct the Intempe
of the Blood, and which dispo
those Nitro-sulphureous Pa
which are lodged in the
Membranes. All Purgatives
answer the same Intent, but

fittest to carry off these, some Particles, which Diversity is to be ascrib'd to an Occult Quality, but to the differing Constitution. So, if the Blood abound with one Choleric or Sulphureous Particles, they being very volatile, do easily yield to any Purgers. But pituitous, viscid and tough Humors, being not so easily moved, and (as may say) having once taken up their Lodging in the Blood, require longer Remedies. In a bilious Head-Ach this following Medicine is proper.

Take Water of Endive & Succory, as much of each as is sufficient, of yellow Rhubarb two Drachms, Salt of Tartar one Ounce. Mix them for a Purge.

This must be done first. In the second Place, the Heat and Sharpness of the Blood which is occasion'd by those sulphureous rudiments is best tempered by watry Urines; for the more Water there is, the lesser Acrimony is there. To this End Acids are proper which correct this bilious Imperature by precipitating the sharp Salts, for which the following Urine may be prescribed.

Take of Water of Betony two Ounces, Water of Succory, Endive, and Wood-Sorrel of each three Ounces, Syrup of Rasp-Berries & Barberries of each an Ounce, Spirit of Vitriol as much as is sufficient to give it a grateful Acidity.

When Sleep is banished by these sharp, excrementitious Particles, which prick the Blood & Meninges of the Brain, it is best reduced by oily

Emulsions, which at the same time stop the too quick Motion of the Animal Spirits and of the Blood. E.g.

Take of the four greater cold Seeds husk'd of each half a Drachm, Seeds of White Poppy three Drachms, with Water of the Flowers of Betony, of the Lime Tree, and of Water Lilies as much of each as is sufficient, make an Emulsion and sweeten it with Sugar.

A Scorbutick and most stubborn Head-Ach is not removed but by Antiscorbuticks mixt with appropriate Medicines, because of its extraordinary saltness and sharpness. E. g.

Take Water of Vervain, Brooklime, Marsh Trefoil of each three Ounces, of the Phlegm of Vitriol two Ounces, Tincture of Roses two Drachms, Syrup of Pearls two Ounces. Mix them.

Thus much of the Bilious, now we come to speak of the Pituitous Head-Ach, which hath not such a sharp, vicious Matter, but a thick gross and tough Blood, and therefore must needs occasion a heavy burthenfom Pain. This Grossness of the Blood must likewise cause a Stupidity of Mind, and produce not lucid, but thick and gross Animal Spirits, which will be fewer and feebler, and all the Motions will be slower. The Stomach too will be out of order, as I found by my Self when I had a Pain in my Head; which Consent between the Head and Stomach I observ'd in a Country-Fellow, who being hurt in his Brain complained more of his Stomach than his Head. And the Reason

son is this; Because the Animal Spirits being put to Flight, and not flowing in due Quantity into the Stomach, its Tone must necessarily be vitiated. Besides, they that are Sick of this Distemper have a perpetual Inclination to Sleep; for the Pores of the Brain being fill'd with a pituitous and viscous Humor, the Animal Spirits are not able to keep them open. Therefore the obstructed Tubes of the Brain and *Meninges*, caused, no doubt, by that gross and pituitous Matter, must first be opened, and then the Humor is to be evacuated. In which Case you may with good Success use both Internal and External Medicines. But that they may come securely to the Place affected (*i. e.*) the Pores of the Brain, it is requisite they should have such stiff Parts as cannot by other Particles crossing them in their Way be easily biased or put out of their Road thither. Such as these common Woods, *Guajacum*, *Sassafras*, *China Root*, *Sarsaparilla*; Barks of *Tamarisk*, *Ash*, &c. which can, by their powerful Force and Stiffness, break through, cut, attenuate, and make flexible the rigid Particles; so that the rest of the Particles being subjugated, may run back again, and at last be quite cast out of the Body. For which Purpose we commend the Decoctions of the forementioned Woods in all the cold, tough and watry Distempers of this Nature. Here follow two Wines medicated with the Ingredients of these Decoctions.

Take of Betony, *Carduus benedictus*, Marjoram, Sage and Rosemary of each a Handful, Flowers of Rosemary and Lavender of each a Pugil, Woods of *Guajacum*, and

Sassafras of each an Ounce, seeds two Drachms, Tartar half an Ounce. Mix them and let them be put in a Bag, which pour a Quart of Wine.

Very like to this, is a excellent Receipt of the famous *delius*.

Take of the Roots of Penny Ounce, of Elecampane Ounce, Leaves of Betony, Sage and Rosemary of each a Handful, Flowers of Wall, Lily of the Valley and Rue of each two Pugils, Flowers one Pugil, of Lavender two Drachms, of Aloes or of Mistletoe Oak one Drachm, of a Drachm and a half. Put in a Bag and boyl them in

The Enemy being thus dissolved and fetter'd, may be quite dissolved by the following Purge.

Take of *Extractum Phlegm* half a Drachm, Resin of eight or ten Grains, Tritolated seven Grains, Salt of Amber three Grains of Marjoram and Amber one Grain. Mix them, and make thirteen Pills. Or, Take of Jalap and Scammony of six Grains, of volatile Salt of Amber three Grains, Gum of *banum* and Ammoniac of half a Drachm, Oil of three Grains. Mix them, and make Pills for one Dose.

The Cephalick Pills of *Croc* (which are the *Extractum* *magorum*) are in these Cases

Infusions of the Leaves of Senna
ns, Cam Agarick, and some resolving
ce. Minalli added, are not to be despi-
a Bag. After that altering volatil
rt of its and aromack Cephalicks close
all. From whatever Cause the
sease arises, but especially if from
e Obstruction of the Vessels and
res of the Brain, all Aromaticks
d such Things as consist of a Vo-
il Salt, as being Nervine, are
ry available; for by their sweet
d gentle Blandishments they che-
etony in the sensible Parts, and thereby
wage the Pain. Such as are the
Wallatril Salt of Amber, and its Tin-
and Rure, the Spirit of Harts-Horn with
s, Amber, the Nervine Balsam of
efer, our Volatil Cephalick Salt,
r Tincture of Antimony (or, in
ad of them other Cephalick Salts,
inctures, &c.) Cinnabarines are
ot to be forgot, nor the Infusion
lf. **Chia**, which we approve of as
ry good. In a lasting, periodi-
l Head-Ach the Medicines are
ten to be changed, which one
ust be careful in, for, the Causes
e sometimes very obscure, which
owever by rightly weighing and
nsidering of Circumstances may
pretty well guess'd at. When
is done, we must be very care-
il to prevent the begetting anew
chose Sulphureous or viscid Re-
ements, or vitious Blood; for if
ey be regenerated, they prove
ore mischievous, and breed great
er Confusion than at the first.
herefore we must be sure to stop
l preternatural Fermentations in
he Ventricle or Heart. In all
ead-Achs, both simple and ma-
ign, the Juice of Crabs drawn
together with the Juice of Ver-
vain excels all others in Goodness.

There is likewise an excellent
Remedy prepared of Hungarian Vi-

triol, which must first be dissolved
in clear Water, then decanted and
evaporated to half, and so put in a
Cellar to CrySTALLIZE; which Cry-
stals, being prepared of Vitriol, have
something of the Nature of Salt,
and therefore do cut. But because
they have many Particles of Cop-
per amongst them, they do gently
bind, and so do, in some manner,
shut up and straiten the Pores of
the Arteries that are too open. Let
half a Drachm of these Crystals be
took Morning and Evening upon
an empty Stomach. Camphore and
its Oil are good in this Di-
stemper.

In Venereal and Scorbutick Pains
which are usually most violent in the
Night-Time, besides the foremen-
tioned, the following Medicaments
are proper.

Take Spirit of *Guajacum* tartariza-
ted, Sassafras of each one Drachm,
Tincture of Antimony 1 Drachm,
Antimonium diaphoreticum twenty
Grains, Decoction of Sassafras
two Ounces. Mix them, and
give it at several Times.

To Women troubled with the
same Distemper, and also subject
to Hysterick Fits give this which
follows.

Take of *Elixir Proprietatis* of *Para-*
celsus two Drachms, Spirit of *Sal*
Armoniac. with Amber, Scurvy-
Grass of each one Drachm, Tin-
cture of Castor, Amber of each
one Drachm. Mix them. Let the
Dose be from half a Drachm to a
Drachm in a proper Vehicle.

If the Distemper comes from
Weakness of Stomach, then Stoma-
chicals,

chicals, as the Stomach Powder of *Birkman*, Pepper Corns swallowed are convenient.

If it proceeds from Drunkenness, viz. from Wine, or that Volatil Acid become furious, Volatil Salts of Harts-Horn, &c. are very proper. Ivy-Leaves, Colewort and Rue applied to the Wrists, cure this Pain. If it comes from Extravasation of the Serum, commonly called Defluxions, Crata's Pills of Amber are very good.

So likewise the Cephalick Spirit of Vitriol, given in a Julep or Spring-Water to twenty Drops or more, does powerfully subdue this vicious Volatil. Emulsions also do the same, for all oily things do correct & amend this intoxicating Acid. Externally, Leaves of Vervain, Ivy, Cabbage and Rue, applied to the Wrist and Head are very good. But of all Remedies the most Sovereign in any sort of Head-Ach, are Mineral Waters, to which the affected fly as to their last Refuge. Many also, in the Spring, drink Juice of the Birch Tree with Success. Errhines, Masticatories and all anti-Epilepticks are here available.

§. 20.

THUS far of *Internal*, now we come to *External* Medicaments, with which sometimes, especially in weak Constitutions, we ought to bridle the Fury of this Distemper. All Aromatics also in this Case are proper, which may pass through the Pores of the Head, and so remove the Obstruction which is made in the Vessels of the Brain. Such as the Spirit of Harts-Horn. But for the sake of young Practitioners we will set down some Forms.

Take Water of Betony and
ram of each three Ounces
phalick Spirit half an O
Harts-Horn one Drachm
half. Mix them. Let
Cloths dipt in this be
the Head.

In a hotter Case the fo
Medicines are proper.

Take Water of Vervain,
and Lettice of each two
ces, Phlegm of Vitriol
Ounce. Mix them. *O*
Flowers of the Peach T
der, Vervain, Poley of th
tain of each one Ounce,
nelle one Drachm. Mi
Or, Take Water of Dil
and Penny-Royal of e
Ounce, Vinegar of R
Ounce, *Opium* dissolved
gar half a Drachm, C
two Grains. Mix them;
an Epithem.

This following Medicine
common and ealie, yet is
cacious.

Take of the Crum of whi
Juniper Berries pickle
alike what is sufficien
Bag may be made of M
Vervain and *Lignum R*

But seeing we have found these Epithems have of Hurt, we must learn to be cautious, for if the Pore the sharp Particles cannot Passage out; from whence conclude that those things Proper which are applied in Form, such as are *Cucuph.* riferous Caps, or Vervain to the Head, to which

to Terence and Cicero, For-
ascribes so great Efficacy, that
will cure the Head-Ach by being
under ones Bolster. Of this
cellent Plant an admirable Plai-
is also made. And likewise if
aded with very sharp Leaven
Oil of Roses, and externally
ied, it is very efficacious; for
is a certain Acidity in this
ven by which the sharp Salts
precipitated. Destilled Oils of
ger, Lavender, Rosemary-
wers, Marjoram, which can ea-
get into the Pores and there
ate, outwardly applied are
per for some, but not for all.
may also make use of several
ements and soporiferous Com-
itions, of which this following
much preferable to all others.

se of Unguentum Populneum and
Alabastrinum of each half an
Ounce, *Requies Nicholai* one
Ounce, Powder of the Seeds
of Dill, white Poppy and Hen-
bane of each two Scruples; Oil
of Nutmegs by Expression half
a Drachm, Oriental Saffron half
a Scruple, dissolved *Opium* two
Scruples, Oil of the Seeds of
Henbane and white Poppies by
expression of each one Scruple.
Mix them. Lay this to the Tem-
ples as a Plaster, but take heed
it be not in time of a *Crisis*. Or,
Take of Oil of Violets three
Drachms, of Vinegar one Drachm,
of *Opium* and Saffron of each three
Grains. With this anoint the
Temples and Forehead.

If it be in the Summer, let the
ice of Crabs be mixed with the
ice of Vervain, which is also
good in a malignant Pain. You
may find Plasters enough here

and there amongst Authors, as
of Betony, and Cephalick Plai-
sters, but that we may not
be tedious we will name one
which excels all the rest, which
is that of *Crato's*. We allow of
Vesicatories, Salivations, Leeches
near the Ears, Venesection, Ar-
teriotomy, Frictions, Cuppings,
according as there is Occasion. In
desperate Cases, and when the
Patient had rather endure any
thing than be so cruelly afflicted,
a Cautey and Burning with *Moxa*
may be used; some also have been
cured by the Trepan, but this
ought never to be done but in a
desperate Head-Ach.

The *Cephalalgia*, *Cephalaea*, and
Hemicrania proceeding from the
same Causes, have altogether the
same Cure. The Variety of the
Causes is only to be respected.

Let the following Pultifs be
laid to the Feet, especially in Ma-
lignant Fevers, and other Pains of
the Head.

Take of the Leaves of Rue newly
gathered two Handfuls, Roots
of three Radishes, of the sharpest
Leaven, Vinegar of Rue as much
as is sufficient. Make a Pul-
tifs.

Amulets of the Roots of Plan-
tain and *Rhodium*, if they be ga-
thered right, do sometimes avail.
Also Lotions for the Feet do often
help, the little nervous Fibres be-
ing by that means cherished and
humoured.

Cumin bru'sd and laid to the
Head is good. Let the Nostrils
and Temples be anointed with
Apoplectick Balsam, mixt with
Oil of Amber and Cinnamon; also
with Balsams of Sulphur and Ani-

ber. And some things of subtil parts must be holden to the Nose, and also stinking things, as Spirit of *Sal Armoniac*. Castor, &c. In a Pituitous Head-Ach Brown Paper dipp'd in distilled Oils, as of Amber, Lavender, Cloves, and laid pretty hot to the Head are very good. *Forestus* ties green or dried Vervain about the Neck, and, as he saith, with very good Success.

Amongst outward Things you may apply Vervain, the Root of

Zedoary and *Rhodium*, Poppy, Kernels of Peach and Flowers of the same of Henbane, Flowers of mil, &c. Or,

Take Oils of Popples and of Peach Stones by Ex of each one Drachm, Juice of Vervain one and a half. With a quantity of Wax make niment, with which anoint the top of the Head and Temples.

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CHAP. II.

Of a Phrensy and Delirium.

§. I.

IN the preceding Chapter we have treated of those Grievances of the Head which are commonly in and about the *Minges, Pericranium*, and nervous membranes of the Brain; we come now to speak of such Distempers as charge their Fury upon the Seat the *Fancy and Memory*, that is, *thin the globular Frame of the Brain*, or rather in the Brain it self; the *Cerebellum* and Nervous *Stem*, amongst which this Distemper is Chief, by Us called *Phrensy*; *Celsus*, *Madness*; by *Avicenna*, *Crisis*, or an *Apostem of the Brain*; by Others *Mentis lesio*, or *Distemper in the Mind*.

Definition.

It is wont to be defined, An Inflammation of the Brain or Membranes, causing an acute Fever, Rage and Loss of ones Wits, proceeding, for the most Part, from the Accension of the Animal Spirits.

This sort of Madness is very painful and dangerous, because the Part wherein it is commonly generated,

Division.

It is wont to be divided into *spurious* and *true*. The *spurious*, they say, is a loss of ones Wits without an Apostem of the Brain, and that a *bilious* Fever commonly follows, which is accompanied with a mighty Thirst, even to that Degree, that the Patients Tongue is rough through extraordinary Dryness. The *true* Phrenzy has an Apostem with it. In the *spurious* the Ravings are not so violent nor frequent as they are in the *true*. We must observe that this milder sort of *Delirium* happens, especially in Fevers at the Time of the *Crisis*, and sometimes before it, and is more violent in the Fit, than in the Time of Intermision. Those that have the *true* Phrenzy never come to their Wits again, and so far lose their Memory as to forget, not only their daily Business, but the Commands of Nature. An Example of which in a miserable young Man *Forestus* has given us, l. 10. Obs. 3.

§. 2. Part affected.

WE now come to the Part affected, about which the Ancients are divided; and they agree pretty well in

Particulars relating to the Disease, yet they mightily differ in this Point; some taking it to be the Substance, others the *Meninges*, others again the Ventracles of the Brain.

Helmont and his Followers being of a quite different Opinion from all the rest, fix the Seat of this *Madness* about the *Præcordia* or Midriff, and think that the carnos Part of the *Diaphragma* is inflam'd, and therefore that the Animal Spirits are hurried violently thither, and thereby cause this *Delirium*.

Willis enters this Labyrinth by another Clew, and places it in the globous Part of the Brain, which as it is reckon'd the Seat of the Phantasie and Memory, so likewise will he have it to be the Part affected.

Sylvius is muchwath of the same Opinion with *Willis*, and therefore we need not repeat it.

Our own Conjecture is this; That those Commotions are raised not only in the Brain, but also in the *Cerebellum*, chiefly in the globous Part of the Brain, and wherever the Animal Spirits rove about.

§. 3. Signs.

WE now proceed to the *Signs*: It is accompanied with a continual dry Fever, by reason of the Animal Spirits being irritated by the Salino-Sulphureous Recrements which are precipitated into the Frame of the Brain, not without a preceding Turgescency. And hence come troublesome Watchings and Difficulty of Sleep. For the Animal Spirits being irritated by these heterogeneous Particles

dispersed in the Brain, are forced to be upon Guard every Moment. What happens that the Patient jumps suddainly out of Bed, as if he were falling, as the raging Animal rush violently into this or that Part of the Body, or Muscle. Respiration in this case is sometimes more frequent, other Times it is stronger, and fetcht, according as the excited Spirits flow more impetuously into the *Diaphragma*. There is a Redness of the Face, because of some over Particles that fly upward, as in a Chimney. One of the most frequent signs is, that the Eyes are also often waters, and the Arteries of the Eyes swell through the great and Ebullition of the Blood. The Body is strangely dry, and if it were Sun-burnt. The Face look big and stern, by Reason of too great Afflux of Animal Spirits, and the puffing up of the Arteries, and Contraction of the Muscles depending thereon. The Pulse is frequent, swift and large, and is a great Thirst, and the Tongue is rough.

The affected are delirious, much distracted that they give no proper Answer, nor remember what they either say or do. Their Discourse is incoherent, and without either Sense or Order. They imagin various Things, contrary one to another; sometimes weeping, sometimes singing, sometimes shouting, according to the Motion of the Animal Spirits light into the various Frame of the Brain. They move into the several Passages of it, and by their various Motion form again, incongruously, those Ideas and Impressions which were

; for so the Mind perceives a false Conception. They are usually and audaciously bent upon the most desperate Attempts, as *Horace* speaks of Men drunk, who fall a fighting though very un- for it. They childishly pick, and play with Feathers, Straws, &c. and their Hands tremble. The Line in this Distemper is usually yellow and thin; and also often red, not by Reason of the Cholera being hurried to the Brain, as the Ancients erroneously did suppose, but because the Sulphureous Remains being not well assimilated and incorporated into the Serum, remain in the Blood, and together with it are carried to the Brain; so that the Urine must needs be white when it wants that which could give it its Tincture: Which, according to *Helmont*, is a very bad Symptom, who says, *When the Urine is clear and not tinged, it is a sign of a subsequent Delirium*. So that a Fever with a continual Delirium is a true Diagnostick Sign of a Phrenzy, provided that the Delirium continue after it. For we call that simple Delirium which appears in a Fever, and goes off when the Fever is over. But if it exceeds its Bounds, and continues longer, and is more intense, then one may reasonably conclude a Phrenzy is at hand. Which still is more certain, when the Patient greedily devours his Medicines and ordinary Drink; and also cannot make Water, his Animal Spirits being so disordered that they are not able to do their excretory Office.

§. 4. Cause.

WE now proceed to the Cause, the principal Matter in

this Disease, on the Knowledge of which the Cure certainly does depend.

The Ancients (to whom for Antiquities Sake we ought to give Precedence) sometimes derive the Cause from superfluous Blood violently carried into the Brain, sometimes from Choler enraged and causing a great Inflammation in the Brain or its *Meninges*; sometimes from adust Choler got into the Brain or *Diaphragma*. If it proceeds from the Blood extravasated, then they observe that the Patient has a foolish Laughter, does not dote so much, nor is so feverish. If it comes from adust Choler, that then he is raving mad and fit to be bound.

Those, say they, that have their whole Brain inflamed by any Humor, quite lose their Reason, and when the fore-Part of it is only inflamed, that the Imagination is more disturbed than the Reason, but when the back-Part of it is only affected, that they lose their Memory in a great Measure. And as the Ancients ascribe a great Deal to Vapors in other Matters; so in this Case they lay the Fault on dry Vapors, that are got up into the Brain and disturb the Animal Spirits.

§. 5.

LET us now come to *Paracelsus*, who makes the immediate Cause to be dry Mercury, sublimated by a three old Heat; which Mercury, according to him, is elevated by the Heat, 1. Of a digestive Virtue, 2. Of Exercise, 3. Of the Stars: For as by the Heat of the Sun several Things may be set on Fire, so the Spirit of

Mercury is easily kindled, either by Sulphur or alone, as Wine taken in a great Quantiry doth sublimate Mercury like Fire. So that a Phrenzy, according to him, is a Mercurial Disease, that has its Being in the Humors, and a Sublimation which proceeds from internal and external Heat. He also says in another Place, This Disease and other Species of it, do proceed from the heaping up of the Spirit of Life, which is obstructed in the Brain, and causes Putrefaction and Exulceration there. Again he says, That Tartar is bred without the Brain in the Region of the Ventricle, from which arise Phrenzy and Madness. So he elsewhere tells us of a Worm that having pierced the *pia* and *dura Mater* caused a Phrenzy.

§. 6.

Helmont says, that a certain kind of Recrement is carried to the Veins about the Midriff, and that a *Delirium* is caused thereby; and violently drags *Hippocrates* to speak for him in these Words, *He that has a strong beating of a Pulse in the Hypochondria, presently turns frantick.* And for this Reason (continues *Helmont*) in the Schools this Passion is called hypochondriacal; adding that there are various sorts of apish and fierce *Delirium's* which vary according to the Quality of that Poison.

§. 7.

Willis argues, that this Distemper is caused by the Animal Spirits being too much irritated or disordered, and confusedly hurried up and down the

globose Frame of the Brain. He reckons the Seat of Memory to be, and thence various Phantasies and confused Notions have their rise, and being thus enraged, they raise many Thoughts. whence it is that whilst they are some one Organ, and sometimes other, they must necessarily utter absurd Speech and discourses. He says, that this sometimes has its Origin in Blood, sometimes even in Animal Spirits residing in the Kind. That it comes from Blood, he proves by burning when the Blood boils to a scum, in which preternatural Effluvy, the heterogeneous Spiriticles, by means of a spumification of the Blood, betime the Pores of the Brain, and rate the Spirits and put them into Confusion. He proves this by Drunkenness, when the intoxicating and untamed Spirits are carried into the Brain, and produce this sad Effect. Nor does this include malignant, contagious Spiriticles (as we see in the Small Meazels, malignant Fevers, &c.) which being got to the Pores of the Brain, disorder the Spiriticles, and cause a Phrenzy. He proves the same Reason, that Nightshade, Mandrake, and other venereal Plants and Poisons may cause this Disease. And as he has before shown that the Cause may proceed from the impetuous Motion of the Animal Spirits; so he argues likewise on the contrary, that it comes sometimes from the Scarcity of them, which is proved by those that are asphyxiated or at the last Gasps, as also a

cerated with Hunger, Watch-
and Hemorrhages. He says
that sometimes the Blood
is at all in the fault, and that
when the Animal Spirits that
Sentry are only disordered
they assist themselves by some ex-
ternal Cause, which he proves by
critical and other convulsive Di-
sorders and Motions.

§. 8.

Now we come to *Sylbius*,
who makes this Disease to
arise from a very sharp and volatil-
izer, or such like Humor, con-
sisting of sharp volatil Salt, and
incorporating it self with the Spi-
ritual Part, and disturbing the Ani-
mal Spirits; by which Means, he
sometimes the Imagination,
sometimes the Memory, and some-
times the Phancy is hurt, and
thence from hence a *Delirium* pro-
ceeds.

§. 9.

Aretes and his Followers make
this *Delirium* to be a short Fu-
re which while it continues Men
speak and act many ridi-
culous Things. Sometimes they
suppose it to arise from the Heat of
the Blood, when it is stuff'd with
Night and other ill Particles, which
enter into the little Pores of the
veins, and its Membranes, and
sometimes sets them on Fire, and
thence they derive an Inflam-
mation, which they say is, when
so angular Bodies light into round
vessels, and thereby leave three lit-
tle Spaces on each side of them ac-
cording to their three *Superficies*;
the filling of which there flows
a certain sort of subtile Matter,

by the Influx whereof, the Parts
and Humors are disturb'd and
mov'd, from whence they argue
this Inflammation arises. Nor do
they doubt that the Animal Spi-
rits may be in Fault through their
Mixture and Motion, especially if
they be more subtile and more agi-
tated than they ought to be; for
then, say they, they form other
Ideas; and the *Glandula Pinealis*
cannot discharge its duty, because
the Animal Spirits do not obey it,
but being unruly and disobedient
to its Command, run hither and
thither and fly away again. Now
the Soul judging according to the
Motions that are brought to it, in
this Perturbation of the Animal Spi-
rits the Motions are irregular and
uncertain, and therefore there can
be no regular compos'd Thoughts.
They prove that that subtile Matter
does contribute much to the Di-
stemper, from this; That Men as
well as Dogs are most obnoxious to
this Disease in the Summer-Time,
and particularly in the Dog-Days,
when this subtile Matter flows in in
greater Quantity, and the Blood
and Animal Spirits, like so much
combustible Matter, are sooner kin-
dled, so that their Motions must
needs be biassed.

§. 10.

HAVING given the Opinion of
others, now we may be al-
lowed to put in our *Own*. Which
is thus; That the Animal Spirits
being kindled are confusedly driven
this Way and that Way, in which
furious Dispersion sometimes they
open these, sometimes other Pores
of the Brain, and violently crowd
thorow wherever they find a Pas-
sage.

Now that which causes this Disturbance and Confusion, is the Blood over heated, and full of Sulphureous Recrements, carried to the globous Part of the Brain, as we see every Day in Fevers, in which there are also sharp and eager Spirits. For as long as these Spirits consist of oily Parts, and some few sharp and watry ones conspiring together; so long they are quiet and all is well. But whenever sharp Particles do preternaturally abound and bear Sway in the Spirits, presently there arise Commotions and Disorders in the globous Part of the Brain where this Mischief happens. Which is manifest enough by two frantick Persons which we opened, in whose Brains we could not find the least Extravasation either of Blood or any other cholerick Humor, or Inflammation of the *Meninges*, or any Apostem: And again we have seen others who had ill favoured Wounds in their Brain, and yet died without raving. So that we do not doubt that some sulphureous, sharp, salt, pungent Recrements, that have their Birth from Intermittent, Continued or Malignant Fevers; or from drinking too much Wine, and the unseasonable Use of other hot Cordials which are carried into the Blood and Spirits, or from some Poisons, do irritate the Animal Spirits, so as to break the Enclosures of the Brain, and creep here and there into the Pores thereof, according as they can get Entrance. It is plain by many Examples, that poisonous Herbs may bring this Disease: For I my self in a Village call'd *Lindheim* near *Limbourg* in *Germany*, saw the Master of the House with his Son and two Daugh-

ters, run so mad by eating a lock which they had mistook for Chervil, that they could say nothing but Nonsense, danced running up and down the House playing strange apish Tricks, was occasion'd, no doubt, by the Animal Spirits turn'd rags by the poisonous Particles of Chervil.

The Reason why this Disease seizes those that are at a Gasp, and other weak Men, is, That the Animal being almost quite spent, forsaking in a great Measure the extreme Parts, do retire to the center where they make their last stand in which Extremity and they in great Confusion and Agitation open unusual Pores, which cause a *Delirium*. Which we observe in an outward Gangrenes; for the Animal being in Danger to be destroyed make hast to be gone, and therefore shelter themselves in the Passages where, by their Disorder, they occasion a *Delirium*. Not much unlike to Garrison-Soldiers, when being beat by the Enemy from their Out-Works, retire into the city and in their Hast beat off the break thorow whatever stands in their Way. Here we are to observe, that as a Fever brings on a *Delirium*, so likewise does a Fever bring a Fever.

The Judgment in this Disorder does not suffer, altho it produce nothing but absurd and ridiculous Effects; for when a frantick Person chides and gries, such Idea's are really presented to the Soul, so that he needs think of chiding; and Error lies in thinking that such Idea's are presented to it by

ward and present Cause, not in the Judgment.

The Eyes often, when the Disease is not violent, shed Tears, because through the extraordinary Motion of the Blood and Serum, there is more Serum carried to the *Glandule Lacrymales* than can be conveniently discharged by the Lympheducts, so that it must needs be forc'd out by way of Tears; but Weeping is only accidental in this Distemper.

There is often a Trembling all over the Body, because through the violent Motion of the Blood and Spirits, the Valves are forced and in a Manner moved, and so the Spirits run violently out of one Muscle into another.

The Dryness of the Mouth in this Distemper proceeds from two Causes. Either when the Serum and small the watry Parts of the Blood are driven through the great Quantity driven through the Habit of the Body or other Passages, so that none flowing to the Mouth or Throat to moisten them, a Dryness and Thirst arise, which may be quenched by drinking. Or, from some Obstruction in the *Glandule Salivales*, so that little or no Saliva can come to the Mouth. In this Case Thirst is not abated but increased by drinking, because it makes the Obstruction greater, which ought to be opened.

§. II. Prognostick.

AS to the Prognostick, It is an acute and very dangerous Disease, and kills in seven Days if there be not speedy Help. And that Phrenzy is most dangerous in which the Urin is white and clear, as *Hippocrates* says, *l. 4. Aph. 72.*

Constant Watching and a lasting Madness are often mortal Symptoms. If Sleep allay it, there will be no Danger. A bilious, virulent and black Vomiting, is an ill Sign, and a dismal Messenger of Death, and as *Hippocrates* witnesses, Death is even at the Door. Those mad Freaks which are accompanied with Laughter, are not so dangerous as bold and premeditated ones are. That Phrenzy which is attended with a hectic or a dry hot Body, is seldom cured; because the Animal Spirits in this Case are very sharp. There is also more or less Danger according to the strength of the Patient. If it remits often, and has many Intervals, it is much better than when 'tis continued. Also young Men are sooner cured of this Disease than old Men, as they are oftener troubled with it than old Men are; for young Men have hotter and more vigorous Blood, and so their Animal Spirits are more furious and the sooner irritated. But old Men have their Spirits more sedate and quiet, and not so easily angered.

If the Excrements be white, it is an ill Sign, because the *Ductus Choledochus* is obstructed, so that the Choler is not carried to the Intestins to tincture the Excrements, but to the Brain. When the Stools are red it is an ill Sign, because it shows either that the Heat is immoderate, and that all is in a Manner burnt up, or that Blood is mixt with them. To pick Straws and Feathers is often a Sign of ensuing Foolishness.

When the Urin is pale and clear, it is a bad Symptom, not because the Choler is carried to the Head, as is vulgarly thought, but because the Pores of the Reins are obstructed,

sted, so that the tincturing Humor cannot pass through them.

Shaking and Shivering are bad Signs, because they denote Defect of Spirits, and Obstruction of the Nerves. Hither also belong the Aphorisms of *Hippocrates*, S. 6. *Aph. 11.* The Hemorrhoids do good because they evacuate, for Evacuation is profitable. Also S. 3. *Aph. 30.* Likewise S. 7. *Aph. 12.* because a great Disease comes upon the Back of another. If the Mischief arise from drinking Wine, and taking other hotter Cordials, and if the *Crisis* be rightly made in a Fever by Urin and Sweat, it is not so dangerous, but may be easily cured. But if the Animal Spirits (tho they be not so hot) contract an ill Habit, and by that Means the Passages and Pores of the Brain be spoiled and perverted, a lasting *Delirium* often follows, as the famous *Willis* also has observed as well as we.

S. 12. Dietetic Cure.

NOW we come to the *Dietetic* Cure, which as in all other Diseases, so likewise in this is principally to be observed.

The *Air* must be temperate and pure, inclining to cold; on the contrary, that which is hotter and dryer must be avoided; for the subtil Matter, according to *Cartes*, may irritate the Animal Spirits of those that are inclinable to this Distemper; and it is observable that Phrenzies are commonly bred under the Dog Star, it being then a hot Season.

The *Meat* must be moist'ning and cooling, such as Peisan, Barley husked and boiled, Lettuce, Endive, Spinach, and the like, which may

be boiled in Broth and given to the Patient. Moderate Exercise must also be observed; for to eat too much heightens the Disease; so likewise too much Abstinence decays the Strength, dissipates the Animal Spirits, the Declension of the Disease may give Fish that delight in a bottom, as Trouts, &c. And by these Means have a Care of sharp, aromatick Things, which fire the Blood and Animal Spirits.

Let the *Drink* be Barley Water sharpened with Spirit of Vine. Several Sorts of Juleps also are made of distilled Waters and Syrups; as likewise Decoctions of Tamarinds, or Nitrous Mineral Water. All spirituous Things, hot, whether rich Wine, or other of Wine, or other hot Cordials, are industriously to be avoided. For it cannot easily be imagined how much by the Use of these Spirits are irritated.

Exercise must be gentle and moderate, nay *Rest* is rather enjoined than that which is great and inordinate. Friction of the lower Parts, whereby the Animal Spirits may be composed, especially when the Symptoms are favourable, are to be advised.

Sleep must by all Means be cured. For hereby the Animal Spirits become more sedate and governable. But if the Patient cannot sleep, he must be brought to sleep by Narcoticks taken inwardly, applied outwardly, viz. by the Use of anodyne Topicks. What it follows, that Watching must be avoided as an Enrager of the Spirits.

The *Excretions* by Stool and Urine ought to be agreeable to Nature; else they must be often pro-

by Art. The affected are frequent-
ly to be put in Mind of making Wa-
ter, and the Chamber-Pot is to be
offered to provoke them to it. For
the Animal Spirits do not flow in a
sufficient Quantity to contract the
Muscles of the Bladder.

Passions of the Mind must be agree-
able, and those that are good hu-
mored, and such as the distemper'd
Person takes most Delight in, are
to be desired to keep him Com-
pany. All great Perturbations of
Mind, as Anger, &c. are to be a-
voided as cautiously as a Mariner
does a Rock; and the Passion of
Love, is dangerous above all the
rest. I knew two young Men,
who being ardently in Love with
their Mistresses, when they despair'd
of Success in their Amours, fell in-
to a *Phrenitis Aphrodisia*, as they
call it, or became mad through
Love, and the poor Wretches, fan-
cied themselves Kings. Of such
also you may read in the German
Ephem. An. 6. & 7. Obs. 54.

§. 13. *Pharmaceutic Cure.*

NOW we proceed, as our Me-
thod requires, to the Cure
by Pharmacy, and first we bring in
the Ancients, who, for Fear of an
Inflammation, and after that, an
Apostem, presently advise Bleeding.
Then they keep the Body loose
with Clysters, and at the same
Time, to prevent the coming of
the Humors and Blood to the
Head, use *Repellents*, such as an
Oxyrrhodinum of Rose-Water, Vi-
negar and Oil of Roses; this, and
other cold Things of the same Na-
ture soaked in a Cloth they apply
cold to the Neck, fore-Part of the
Head, or the whole Head, and often
repeat them.

For the same End they prescribe
Embrocations of a Decoction of
white Poppy, Henbane, Flowers of
Water-Lily, Violets, Roses, and of
the Juice of Plantain, Lettuce, Sem-
pervive, &c. They also steep pieces
of woollen Rags in these and other
Liquors, and lay them to the fore-
Part of the Head, believing that
they drive away, thicken and cool
Vapors and hot Humors. They ad-
vise the applying of *Unguentum*
Alabastrinum and *Populneum* to the
Temples. Also that the Force and
Violence of the Humor may be
stopt, they command the Applica-
tion of Cupping-Glasses with Scarifi-
cation to Parts near the Head, if
Venesection was upon any Account
omitted. Afterward that the Heat
of the Blood may be somewhat al-
layed, they give a convenient Sy-
rup, which also may cause Sleep.
After the Humors are some Way or
other pretty well compos'd, they
next contrive to discharge by Ca-
tharticks the sharp Reliques which
are left behind. When the Cause
proceeds from Choler or Blood they
purge with Electuary of Juice of
Roses, *Diaprunum solutivum*, Syrup
of Roses, *Pilula aurea*, Troches of
Rhubarb, *Cassia* newly drawn, *Man-
na*, Rhubarb infus'd in Water of
Endive. When it comes from Me-
lancholy, or, when black Choler,
as they call it, does abound, they
use stronger Purgers, as Extract of
Hellebore, Leaves of *Senna*, &c.

After that they try to keep the
Humors from the Head by binding
and rubbing the outward Parts, and
by Lotions. Their Revellers are
Blood-Letting, Clysters, Leeches
applied to the Forehead and Tem-
ples. They also prescribe washing
the Feet and Hands in a Decoction
of Lettuce, Violets, Plantain, &c.

Then

Then they strengthen the Brain with their Corroboratives, as *Diamargariton frigidum*, Syrup of Pomgranates, Conserve of Violets, Flowers of Water-Lily, Bugloss, &c. Nor do they neglect Baths of fresh Water, and Irrigations of the Head with Violets, Lettuce, Flowers of Water Lily. They shave the Head and lay thereto a Ram's Lungs or Liver, a Whelp, Capon, Hen or other Creatures gutted, cut in two and reeking hot. The Thirst which is usually very troublesome in this Distemper, they assuage with Juice of Currans given in a convenient Decoction to the Quantity of one Ounce or more. They cause Rest with Anodynes and Opiats, but dissuade the too frequent Use of them, lest the Distemper turn into a Lethargy. And if the Urin be stop't they provoke it by Diureticks and proper Bags applied above the Pubes, taking their Measures according to the Patients Strength.

§. 14.

NOW we come to Paracelsus's Way of Cure, which consists commonly in these three Things. 1. In taking away the Sublimation of Mercury. 2. In removing Obstructions. And 3. In restoring and strengthening the Animal Spirits when they are weakened. The Business of the first is done not only by Coolers, but by Anodynes too, which by their stupefactive Quality do assuage and coagulate the raging Spirits: For which he mightily commends *Laudanum*, his own Invention, taken from three to five Grains; by which he tells us, a German Prince afflicted with this Disease, was made perfectly well both in Body and Mind.

Yet some of his Sect prefer ral or Metalline *Laudanum*, *Laudanum* without *Opium*, Sulphur of Vitriol. For the second, *i. e.* to remove Obstructions, he says the Spirit of Vitriol, especially that which is call'd the philosophical Spirit, *Arcanum*, or Extract of Hellebore, Salt of Spirit of Salt, Spirit of the Antimonial Elixir of *Paracelsus*, &c. For the third *i. e.* to comfort the Brain, he recommends the Water, or green liquor, or Sky-coloured Tincture of Silver, or Tincture of the Essence of Topaz, Sapphir, Oil of Amber, &c. The chief remedies of other Chymists in this Distemper are, the true Tincture of Gold prepar'd with the five *Menstrua's*, given even from three to six Drops, Tincture of Coral, Oil and Salt of Pearls, also Spirit of Camphore given in Rose-Water, and Magistery of Tar given in Water of Sassafras with Castor.

§. 15.

HELMONT thinks the Remedy should not be applied to the Head, because he supposes the Cause of Madness and Phrenzy to lye in the *Præcordia*. But this is to take Notice only of the Effect, and not the Cause; like silly Children who bite the Stone thrown at them, without regarding the Hand that threw it. And therefore it is that he advises the Immersion of the Head in cold Water; and, which is more as he exceedingly extols the volatile, Narcotick Philosophical Spirit of Vitriol in all Alienations of Mind, so particularly in Phrenzy.

§. 16.

Naturæ teaches that two Things especially are to be regarded in curing this Distemper, The Fever and the Turgescentcy. Therefore the Heat or the boiling of the Blood, from whatever Cause proceeded, is to be presently allayed and stopt, and the enflamed Animal Spirits, must be gently disposed and extinguished. For which Reason he is of Opinion that the Patient must immediately be bled, and that it should be often repeated, if his Strength will permit it (for Nothing more quenches the enkindled Blood than Venesection) which, he says, must be done by opening a Vein either in the Arm, or Hand, or Fore-arm, Throat, or Foot: Nor does he refuse Perfect Arteriotomy, Bleeding with the gimblets, Cupping-Glasses: and, above all Things, he commends Sucklers for preventing the Feverish Matter from flying from the Viscera up to the Head. Amongst Purgers, he allows of Loosners, and such as purge gently; as for Vomits and strong Catharticks, being allied Things that very much weaken, he positively excludes them. He cries up Phlegmatic Cataplasms of Rue, Vervain, Briar-root, Flowers of wild Poppy Effect with Soap applied to the Feet. But he does he ascribe less to Juleps and cooling Decoctions, in allaying the Heat of the Blood. But if all these foresaid Medicines prove ineffectual, he has Recourse to a moderate Use of Hypnoticks and Narcoticks. But he bids us deal cautiously with them, lest the Morbid Matter dispersed in the Brain, be thereby more closely and deeply fixed in. Yet he says his liquid

Laudanum, prepared with Salt of Tartar and Juice of Quinces, has been often effectually used, either taken by it self, or in any convenient Liquor and Dose.

For this Purpose he also applies externally soporiferous Epithems, to the Temples and fore-Part of the Head to cause Sleep; likewise Lambs and Weathers Lungs reeking hot, or Pigeons or Chickens cut in two and laid to the Head. Houfleeke also bruised in Woman's Milk and laid to the fore-Part of the Head, he asserts to be very good. Yet all these Things he bids us be sure to use with Respect to the Patient's Strength, or else our Labour is in Vain; for if we destroy the Animal Spirits, we cure the Disease by killing the Patient. Therefore to preserve Strength he advises to take about 20 Drops of the Tincture of Coral twice or thrice a Day, in a proper Cordial Draught.

§. 17.

Splivius, to correct the sharp Cholera which he supposes most commonly to be the Cause of the *Delirium*, and which weakens the natural Consistency of the Blood, and sometimes destroys the Foundations of Life, uses chiefly this following Mixture.

Take of *Diascordium* of *Frascastorius* two Drachms, Confection of Hyacinth one Drachm, Syrup of white Poppy one Ounce, Water of Plantain two Ounces, Fennel one Ounce. Mix them.

This he gives by a Spoonful at a Time and very often; advising likewise in this Case to let Blood.

He

He calls in also Dietetic Remedies to correct the sharp Choler. Commending a gentle cool Air, fattish Victuals, Almond-Milk, Barley-Broth, or Emulsions prepared of them, because these Things do dull and correct the sharp Particles of the Choler. He says that a Jelly of young Flesh has the same Effect, for the same Reason, because it abates the Acrimony of the Choler and dulls it. He much commends small Beer brewed with Barley, and Pisans of the same with Liquorice, Raisins and Currans skin'd, with which the vitious Matter, to wit, the Sharpness of the Choler is corrected, and Rest is absolutely commanded both to the Body and Mind. He thinks likewise that Mirth and Sadness, provided it be but moderate, contribute much to the Cure of this Disease.

§. 18.

Cartes and his Followers commend Opiates to mitigate a Delirium, assuage Ravings, regulate the Disorders of the Blood, and allay the burning Fury of the Animal Spirits, which are caused chiefly by irregular Particles and Intervention of a subtile Matter. Which Opiates force these furious Spirits to a Repose, stop, and, as it were, conglutinate the Nerves, and gently correct those sharp Particles which so cut the Fibres and Branches of the Nerves, that the Fibres which before were stretch'd like Strings of an Instrument, run back and are turn'd into certain round Curles or Circles, which foresaid Rings or Curles being got into the Passages of the Nerves stop the gliding Spirits, so that they cannot be carried to the several Parts of the

Body and discharge their Natural Offices. The *Cartesians* likewise magnifie precipitating (by other commonly called cooling) Medicines; as, *Nitrum Perlatum*, which being dissolved in Water is of great Use, because it fixes the Spirits in the Blood, and also opens Obstructions; they also commend destilled *Vinigar*, *Antimonium Diaphoreticum*, and all heavy Things, as Pearl, and all shelly Things, all Martiars, the Bole, each of which put a Stop to the Animal Spirits, and restrain the Motion of the Blood, so that neither the one nor the other can fall out; for which End so much commends the foresaid Opiates.

§. 19.

Our own Opinion in this Disease (besides the retick Cure to be observed as fore) is as follows. There must be all Care imaginable taken that the Animal Spirits dispersed and enraged, be again quell'd and composed; which Intent is answered by Venesection and Arteriotomy in the Arm, or Forehead, or in the Temples, because the Blood is too quick and subtile. By what Arteriotomy I happily cured a certain Butcher that was Frantic without any other Remedy: his wound of the Artery after Incision being bound up with the common Plaister of Hares Furr and whites of Eggs, or by our own Stick Liquor (or, instead thereof some other Stryptick). 'tis wonderful to think how sedate the Animal Spirits do become thereby, and how well they perform their Offices. Amongst other Chyrurgical Operations which are to be

accom

according as there is Occasion, the following are not to be neglected, to wit, Bleeding with Leeches, Cupping with Scarification, by which Means the raging Animal Spirits may be discharged.

We commend the Infusion of divers Liquors into the Veins, especially of Opiates, as the Anodyne Essence of Zuelfer, &c. And the Transfusion of Man's, Calf's or Lamb's Blood into the Veins of the distemper'd Person; for by this, as by a Donative or Largeſs, the Fury of the Animal Spirits is abated. Veficatories likewise are not useleſs, which carry off the sharp Particles that offend the Spirits. And to this End also Frictions and Ligatures of the extreme Parts, Baths and washing of the Feet are convenient. Thus the German *Ephemerides* tell us of a young Man mad with Love, and so dry that his Bones would scarce hang together, that was cured by bathing in fresh Water.

We now pass on from the *Chirurgic* to the *Pharmaceutic* Part. Gentle, cooling, mollifying, loosning Clysters must be given; for in all acute Diseases strong Purges are hurtful, because they encrease the Motion of the Blood and Spirits. In like manner if there be many sulphureous Particles which do not easily give Way to strong Catharticks, which do themselves irritate the Animal Spirits, I would advise gentler Lenitives to be given, such as Decoction of Tamarinds, of Barley, with Raisins and Roots of Sorrel, adding, to make it grateful to the Taſt, either Syrup of wild Poppy, or Barberries, or Wood-Sorrel, &c. all which do wonderful well perform their desired Effect. To compose and allay the Fury of the Animal Spirits

try and acid Things are good; for they restore the Serum, which if wanting may be prejudicial; such are Water of Endive, Plantain, Sorrel, Whey, divers Juleps, &c.

Amongst Acids these excel; The Juice of Citrons, acid Pomgranates, Sorrel; acid Mineral Spirits, of Vitriol, *Clyſſus Mineralis Antimonii*, Phlegm of Vitriol, Tincture of Roses, of the four Cordial Flowers, &c.

Nitrous Things also, which are reckoned amongst Acids, do very much abate the Heat of the Blood, and assuage and bridle the roving Spirits; as, *Nitrum Antimoniatum*, *Perlatus*, Nitrous Mineral VVaters, &c.

Terreous, or Earthy Things also are to be given for the same Purpose, because they do the Work by precipitating, and those are Coral, Pearl, the five precious Stones, Shells, Unicorn's Horn, and almost all ponderous Things. For the sake of young Practitioners, we set down the following Forms.

Take of Water of Endive, Wood-Sorrel of each three Ounces, Plantain one Ounce and a half, Spirit of Nitre thirty Grains, Syrup of wild Poppy one Ounce. Mix them and make a Julep. Or, Take of the four greater cold Seeds, of each one Drachm, white Poppy an Ounce and a half. With Water of Endive, Self-Heal, Lettuce as much of each as you please, make an Emulsion, adding in the End a Drachm of prepared Coral.

A Decoction of Hips is commended by some. Or,

Take

Take of *Lapis Prunella* (or of *Nitrum Antimoniatum*) an Ounce and a half, burnt Harts-Horn half an Ounce. Mix them. Let some of this Powder be put in Whey or ordinary Drink.

Also Tincture of Roses, Violets, Essence of Pimpernel compound, *Minera Saturni*, &c. are very good.

But if these excellent Medicaments prove unsuccessful, our last Recourse is to Opiates, that seldom or never fail; for they compose the disordered Spirits, refresh decayed Nature, and when tired out, do cherish her with pleasing Rest. Or they bridle the raging *Lympha*, or the too much fermenting mass of Blood, and do also reduce the tumultuous Spirits under their former Government. But one Thing is to be observed of Opiates, when they have to do with a Phrenzy that comes of a Fever; that when the Fever is predominant they are not so certain, nor do so exactly answer the Physician's Expectation; yet if they are given when the Fever declines they prove very effectual, as also the experienc'd Dr. Sydenham observes in his excellent Book of Fevers; and there you will find the Reason why they are not Effectual if given before. We saw the same Effect in a certain Woman at *Limbourgh*, who in the Declension of a malignant Fever, drank a quarter of a Pint of rich Wine, and fell into a Phrenzy, whom we fortunately recovered with the following Opiate mixture, given now and then to three Spoonfuls at a Time.

Take of Water of Betony, Borrage of each an Ounce and a half, Tin-

cture of Roses six Ounces, *Opi*
Laudanum cut five Grains, Co-
fection of Hyacinth one Drachm
Syrup of Sorrel, Citron of
six Drachms, Spirit of *Sal Ar-*
niac, ten Grains. Mix them,
let it be given as aforesaid.

But these Narcoticks are not
any Means to be given when
think the Patient is weak, and
a *Crisis* is at Hand; and we
always begin with a very little
to see what the Blood can bear,
suppose, with this.

Take of Syrup of Poppy
Drachms, Opiate *Laudanum*
Grain. Mix them. After
always the Dose may be
creased.

The *Pulvis absorbens* of *Wal-*
described in his excellent Tre-
of *Opium* does the same Thing.
Anodyne Tincture of *Zuelfer*
a Drachm to a Drachm and an
Laudanum Cydoniatum of *Hof-*
our own *Theriaca Caelestis*, and
niferous Emulsions, and several
such sort of soporiferous Me-
ments are very effectual in cool-
ing and allaying the raging Spi-

Amongst Specificks we re-
our own Powder which we
Praannon, because it does wo-
fully appease the Animal Spi-
when disordered, and indeed
have done prodigious Things
it in this Disease, especially
giving it often; which we
lingly communicate for the
young Practitioners.

Take of the Specifick Cephal-
Michael one Drachm, *Laud-*
Cydoniatum of *Hoffman* half a
ple, *Nitrum Antimoniatum*

Drachm, Crabs Eys prepar'd, Magistery of *Luna*, Amber of each half a Scruple, Leaves of Gold No. 11. Mix them, and make a very fine Powder. The Dose is from half a Scruple to a Scruple, or half a Drachm.

Ground-Moss is also very good. To remove Obstructions in the Brain and *Meninges*, and to restore Blood to its due Mixture, the following anti-Febrifick Sudorifick may be prescribed.

Take of *Carduus benedictus* fifteen Grains, *Laudanum Opiatum* one Grain, sweet Spirit of Nitre six Drops, Water of *Carduus benedictus* two Ounces, Syrup of Poppy three Drachms. Mix them. Or, Take of *Bezoardicum minerale* half a Scruple, Water of *Carduus benedictus* three Ounces. Mix them.

Or this following Powder may be given, which hath done Wonders.

Take of *Lapis Prunella* fifteen Grains, Camphore three Grains, *Laudanum Opiatum* half a Grain. Mix them, and make a Powder.

Having done with internal now come to external Remedies, which we would not have neglected; amongst which we advise cooling and precipitating Epithems. Water and Vinegar of Roses, or the Seeds of white Poppy, Lettuce, Kernels of Peach Nuts, with Water of Roses, Poppy, Water Lily, Artichoke, Endive, applied to the Forehead and fore-Part of the Head. The same Effect have diaphoretic, somniferous Unguents, and especially our own soporiferous

Mixture laid to the Temples in Form of a Plaister. *Willis* is for the Application of several Animals abovementioned, as Pigeons, Chickens, Whelps, &c. We shave the Head and lay thereto live Swallows cut in two in the Middle, which Secret we extremely value; for it does mightily appease and mitigate the Fury of the Animal Spirits, and a pure gentle Heat and Steam issues from them, which is very agreeable to the Pores, and very proper for removing Obstructions. Caraplasms of green Herbs, Purslain, Sempervive, Flowers of Roses, Water Lily, Chamomil, and Melilot are very good. You may also apply Leaven and Rue to the Soles of the Feet, and Epithems to the Testes. *Barthollett. in Method. de difficil. Respir. l. 5.* mightily commends the Pulp of Garden-Gourd bruised, and says, that if laid to the Head, when shaven, it wonderfully cools, and that herewith he cured a desperate Phrenzy.

The Cure is sometimes to be directed to the Symptoms, so that to provoke Urin, if the Patient forgets, the *Pellet* and *Perinæum* must be anointed with Oil of Scorpions and some fix'd Salt, that by the Acrimony the Bladder may be irritated.

Take of Oil of Scorpions three Drachms, Seeds of *Daucus* of *Creet* one Drachm. Mix them.

If there be violent Heat, the following Powder is convenient, which will cool, and yet not obstruct.

Take of *Nitrum Perlatum* half a Scruple, Camphore two Grains. *Bezoardicum Minerale* five Grains.

Spirit of Nitre is also very good.

Take two Pints of Whey in which Steel has been quenched, add thereto of Syrup of Sorrel, Citron, or some other an Ounce and an half, or of Tamarind Wine. Or, Put thirty Drops of *Mixtura simplex* or *Bezoardica* in ordinary Drink.

The following *Oxyrrhodinum* is excellent to cause a gentle Sleep.

Take of Rose-Water ten Ounces, Juice of Lettuce two Ounces, *Opium* half a Drachm, Saffron a Scruple. Mix them, and make an Epithem. Or, Take of the

Sperm of Frogs six Ounces of Crey-fish three Ounces, corrected with Vinegar Drachm, Camphore, Saffron each six Grains. Mix them.

For a Liniment to the Head the following.

Take of *Unguentum Popule* an Ounce, *Laudanum Opium* Grains, or of *Opium* twelve Grains, Camphore half a Scruple, white Poppy, as much sufficient to make a Liniment. Or, you may apply the Pulp of a Garden-Gourd, Juice of Lettuce, Purslain, Shade, &c. to the Forehead.

CH

CHAP. III.

Of Melancholy.

IN the preceding Chapter we treated of the Animal Spirits, when tumultuary and ungovernable, here we find them, the other Hand, so much dejected and declined from their Natural Briskness, that they are scarce able to perform any Function aright.

§. I. Definition.

THIS Distemper is commonly defined by others, *A certain sort of Delirium or Dotage, without a Fever and Rage, proceeding from a melancholy Humor*; which in our Opinion is well enough, but for Periphrasies sake we give this Definition, *A Delirium without a Fever and Rage, arising from the Dulness and Unactiveness of the Animal Spirits.*

The Essential Cause of this Distemper (if it be not clearly explained already) is, the Imagination's being so disturb'd as to fancy strange and monstrous Things, but with Fear and Sadness; whereupon it comes to pass that the Animal Spirits, forgetful, as it were, of their Duties, flow less plentifully into the several Organs to perform their Offices, so that the *Viscera* being defrauded of their Spirits,

have not their due Fermentation, without which they cannot perform their proper Actions, whence the Body becomes fill'd with acid, viscous and tenacious Flegm; and then those few Spirits being entangled, and as it were agglutinated in this tough Matter, are insensibly wasted every Day, more and more, upon the loss of which the diseased Person lives very miserably. But to come nearer the Business, and to give the *Genus* of our Definition. In this Disease are found various *Delirium's*, and (as *Willis* says) fabulous Antiquity has scarce invented any *Metamorphosis* of Man, which some or other have not fancied in themselves.

§. 2. Division.

WE divide this Disease into *Melancholy Cephalic*, and *Hypochondriac*. A *Cephalic* is when the Disorder is in the Brain, and the *Hypochondria* are not in fault: The *Hypochondriac* is when the Disease has its Seat about the lower Part of the *Abdomen*.

§. 3. Part affected.

NOW we come to the *Part affected*, which according to the

Opinion of the Ancients is the Brain it self, and they say it is hurt as it is a peculiar Part; for they derive all the chief Faculties of the Soul from thence, and will have in this Case the principal Faculty thereof, that is, the Imagination, not the Cogitation or Memory, to be hurt. The excellent *Hippocrates* asserts, 6. *Epid. Sect. 8. t. 38.* that the Soul in this Distemper, is distinctly affected, and, as it were, without the Body and Brain. The Brain, say others, is hurt essentially, and that then there are no Signs of the *Præcordia*, *Hypochondria*, or of any other Part being affected, and that in that Case the Symptoms are more favourable, and that a Lividness appears in the Face: If the Brain be hurt by Communication or Consent; as by the Spleen, *Hypochondria*, or by the Womb, when a melancholy Humor is generated there, that then the Symptoms commonly ascribed to the Womb do appear in those Parts affected. For they tell us that in Child-bearing Women, whose *Lochia* are stop'd, or in Maids when their Terms do not flow, the Blood is spoil'd, and becomes more fixt, and is turn'd into a melancholy Dyscrasy, and that by this Means this Distemper arises. For which Reason the Ancients blame the Spleen; but Our Opinion is, that rather the morbid Product than the Disease it self, lies there. The famous *Willis* thinks that both the Heart and Brain in this Case are affected. Some take the Corporeal Soul to be the Subject of it. *Helmont* thinks that it lies out of the Brain in the *Præcordia*, and about the Mouth of the Stomach. Our own Opinion, in short, is, That it has its Residence in the globous Frame of

the Brain, which being the principal Part, and the Fountain whence the Animal Spirits issue into every Corner of the Body, they be dull, languid and unactive in the *Hypochondria*, Spleen, *Pancreas*, Mesentery, Womb, being thereby deprived of Fermentations, must needs be in the common Calamity, as the Receptacles of latent Evil

§. 4. Signs.

THE two principal Signs of this Disease are Fear and Sorrow. All melancholy People are extraordinary fearful and sad; which the famous *Willis* (as we have said above) ascribes to the Passion of the Heart; for it must needs be a Fellow-Sufferer, when the Animal Spirits are so dull and sleepy, that they cannot irradiate and quicken up. For whereas naturally in a sound state they ought to be brisk, lively, clear, fine and bright, now they are sad, dark, and heavy, as if they were dead, and as tempests the dismal blackness of Night may make the boldest shake. A joyful Spirit, on the contrary (says the *Wise Man*, Prov. 22, &c.) makes the days of a man's life pleasant and flourishing; but as a sad Spirit causes the days to be dry, and brings a speedy death. Those that are affected with this Disease are weary of their present Thoughts, have strange convulsions of their Limbs, are Epileptical through the whole body. They begin to talk idly without any Order. They are often fall a weeping, and take pleasure in being alone, and anon what they so lately delighted

They are so jealous that they think every body cheats and lays Snares upon them, and are even afraid of Poison in their Bread. They sleep so little that the Nightingale is not more vigilant; and this short Rest is attended with strange frightful Dreams, which many Physicians erroneously ascribe to Vapors rising from the Spleen, which We attribute rather to Spirits got out of their proper Sphere.

These were the General Signs, now we come to the Special. Some Melancholy People have always a foolish silly Laughter like Democritus, others again never cease Weeping, as if by a Pythagorean Metempsychosis, the Soul of Heraclitus were transmigrated into them. Many imagine themselves Prophets and Prophecy of things to come. Some vainly fancy that they are great Kings or Princes, and that the Staff they carry in their Hands is a Scepter. Others believe that they are transformed into a new Species, whence it is that they imitate the Sounds and Gestures of Cuckows, Ducks, Wolves, Dogs and other Creatures. Many think themselves wretched Pits, and therefore are afraid of meeting any Body lest they should be broken. Others think they are made of Glass, and are much concern'd lest by being too hard grasp'd they should be crush'd to Pieces. Some that they are dead, and are very importunate to be carried to their Graves. Many think they see an evil Spirit in this or the other Pot or Chest, and that Reason they are thought by the Vulgar to be possess'd by the evil. Others, though they fear Death, yet some wish for it, and sometimes do lay violent Hands

upon themselves; three Examples of which, I my self have known. Some think they want their Heads. Some all their Members, as Arms, Feet, &c. and fancy to themselves such a mangled Body as *Aeneas* in *Virgil* saw *Deiphobus* have.

————— *Lacerum crudeliter ora,
Ora manusq; ambas, populataq; tem-
pora raptis
Auribus, & truncas inhonesto vul-
nere nares.*

Some supposing themselves to be dead, refuse to eat. Many think that Soldiers and Officers are ready to seize them and carry them to Prison; of which we have an elegant Example in the famous *Barclay*, *Argenid. l. i. cap. 13.* (where he tells a Story of one *Heraclion*, who being notoriously famous at Court for his erroneous Fancying himself a Prince, fled away, and being apprehended was brought back again) but he perhaps endeavours more to be jocular than to speak the Truth. Many are afraid that the Earth will open and swallow them up. Some are intent upon Battles, Contentions, Quarrels, Studies, Prayers, or such other Employment and Course of Life as they have been conversant in, to which that of the Poet may very well be applied.

*Navita de ventis, de tauris narrat
arator,
Enumerat miles vulnera, Pastor
ovēs.*

And some that are awake, are not unlike to others in a Dream. But to be short, It is most true which *Willis* observes, That it would be a miraculous and almost endless Toil,

to reckon up the several mad Freaks and Whimsies of Melancholy People.

§. 5. Cause.

THE Ancients reckoned the Cause of this strange Disease to be the cold & dry Intemperature of the Brain, either naturally, or only accidentally so; but thought it to proceed for the most Part from a Melancholy Humor, viz. Black Choler, which they think is lodg'd, and abides in the Vessels of the Mesentery, from whence they think Vapors like a Cloud ascend into the Head, and so far obnubilate the Animal Spirits, as to make the Brain a meer Darkness. They assert likewise that the Blood grows adust, which causes Melancholy Vapors to mount up to the Head, like the Fumes that arise from the burning of wet or green Wood, as is usual in *Delirium's* caused by Fevers. But we will not spend our Time in confuting the palpable Errors of these obstinate and hair-brain'd Fellows, who are not capable of understanding better. *Hellmont* has done it already. Neither does our Design permit us; for we allow every Sect its own Opinion, and willingly let them enjoy the Fruits of their Labour. But, to the Business in Hand. Amongst remote Causes, they reckon, as others do, Sadness, Grief, Solitudes, Watchings, Preternatural Stoppage of the Terms and Hemorrhoids, whence they think malignant Vapors ascend into the Head. And it is wonderful to think how stiffly the *Galenists* (who tread in their Master's steps) assert, that nothing but Vapors offend the Head, even ascribing to them the airy Phan-

tasms which arise in Dreams, a Heftoring conceited *Galen* asking by a Gentleman in presence, what was the Reason he was every Night troubled with frightful Dreams, answered, they proceeded from Vapors from the Spleen. Another at his Elbow said, No, they caused by Vapors and Streams up from the Ventricle. I omit these Trifles, The *Galenists* do accuse the ill Disposition of the Bladder, Spleen, Liver, Kidney, and the other *Viscera*, in which earnestly contend that too much melancholy Blood is generated.

§. 6.

NOW we come to the *Galenists*, who are so near the Mark. They think this melancholy Humor has a elementary Coldness and Dryness, yet a considerable Acidity and Bitterness, not unlike the Spirit of *Armoniac*. and that it has a power of fermenting and dissolving the hardest Bodies, and of digesting Meats, and procuring Appetite. Neither do they think this Humour, commonly the Cause of the Tragedy, to the Intemperature of the Spleen, but say that it is diffused through the whole Body, which whilst it seizes the (whereby the Animal Spirit comes either fiery, earthy, or fuliginous) causes various *Delirium's*. They also assert that this Disease sometimes comes from the Sublimation of the Mercury, that it is sometimes Astral, and much from an Entity of the Soul (as they call it) as from a mixture of Nature and Poison. Some of the same Class feign I know,

at sort of terrestrial Juice and
star lodging in the Blood, and
employing the Brain.

§. 7.

He renowned *Delmont* thinks
the Cause lies out of the Brain
the *Præcordia*, and that it is
perfected about the Orifice of the
Stomach. Furthermore he proves
the Poisons, which have the
power of disordering the Imagi-
nation, do not primarily affect the
Brain, but only the *Præcordia* and
Stomach; for whatever goes into
Stomach, is perfectly changed
and turned into another Essence
before it stir at all from thence.
Neither does the noble Author
think that Cephalick Pills draw
any thing from the Head, and that
they if they affect the Head, alter or
help it, that it is from the *Præcor-*
Dryad. Nor does he accuse the thick,
lity and sharp Vapors, which the
Schools have invented, but thinks
that the disorders of the sensitive
Soul occasion the Madness; For
which reason he places the Soul in
the Center of the Body, or in the
 midst of the *Parenchyma* of the
Stomach, wherein he supposes it
to reside, rather than in the Brain,
that it may the better Communi-
cate with the rest of the Members;
and that all soporiferous Diseases are by
this called down right Madness,
which he will have to arise from
the thick, and, as it were, febrile Re-
ments. For the *Collegia* or Fra-
gnities of Impurities (as he im-
properly expresses it) do presently
invade the Monarchic State, so
that they do forcibly imprint a
strange Phancy in the sensitive
Soul; as is plain in *Opium*, *Hen-*
bane, &c. which Impurities en-

compassing the sensitive Soul in its
Original *Viscus*, lay asleep its In-
tellective Act, not being able to
shine out clearly when it is so be-
set. And the same Author says, he
has found many thus distemper'd,
who have perceived the Intelle-
ctual Impressions in the lower Parts
to begin to rise Confusedly up-
wards, and that they first fail'd in
their Memory: And that there-
fore from hence may be gathered,
that the Intellective Faculty is feat-
ed a great way from the Head;
just as the Parts that are remote
from the Heart, are first of all sen-
sible of the defect of Vital Influe-
ence. So that I have observ'd in
Delirium's, that first of all there is
a forgetting of things which we
have formerly had an Impression
of, instead of which arises a rest-
less and constant Remembrance of
one Particular Thing, which is like
a repeated Dream, with trouble-
some Tossing and Pain, which is
succeeded by Watching; to wit,
when the former sleepy Impressions
of the Brain have weaken'd the
Memory, then there comes from
the *Præcordia*, a waking Kind of
Dream with a manifest *Delirium*.
Neither, Continues he, is this *De-*
lirium accompanied with a Cessa-
tion of the Intellectual Power, as
it is in an Apoplexy, dead Sleep,
Syncope, &c. but it is a confus'd
and incessant Propagation of the
Idea's which being made in the *Præ-*
cordia are darted upward. And
seeing that in Health there is
no Conception without *Idea's*,
so must there needs also be mad
Idea's or Impressions in a *Deliri-*
um. And he afterwards tells us,
that Madness often proceeds from
Fear, Agony, Envy, Ambition, Co-
vetousness, and such other Pertur-

bations of the Mind, which Mad *Idea's* arising from thence, have their Incentives of their Repetitions, Periods, and Intervals of Paroxysms or inexhaustible Supplies in the Spirit of the *Præcordia*. And many other weighry Things doth he add, very necessary for the explaining the Cause of this Disease, but he is so obscure that I will rather choose to remit the Reader to the Author himself, than proceed any further.

§. 8.

Willis in this Case blames the Indisposition of the Animal Spirits, which he supposes to be naturally transparent, fine and clear, but that in Melancholists they are obscure and cloudy, and that they therefore represent the Images of things shady and dark. Which Animal Spirits, thus affected, he usually compares to Chymical Liquors, and thinks they are like an acid Spirit, destill'd from Salt, Vinegar, and such other Things; and suspects that in these Melancholy Diseases, they have such a sharp Quality as fluid Salts have. For those Spirits by reason of their saline, and as it were pointed Particles, while they stream out from the very Middle of the Brain, do not so exactly observe the Tracks and Circles of their Expansion, but make themselves many new and unusual Cavities within the globous Substance of it; and from hence happen such strange, impertinent, and for the most Part absurd Thoughts and Meditations, as now and then Melancholy People have. He thinks the *Procatarctic* Cause of this Disease to be partly from the æterous Disposition of the Animal

Spirits, partly from the *anæmic* Dyscrasy of the Blood.

§. 9.

Now we come to *Delirium*, who says expressly, that Disease does not spare the Functions of the Soul, and besides confounding the simple apprehension, that it disturbs the Operations of the Wit, takes the Memory, and does so fast and strict as Continually to excite and dispose the Mind to Melancholy and Fear, and indeed with a kind of *Delirium*, sometimes more, and sometimes less Considerable; and he calls only *Melancholy*. *Koga* gives it the Addition of *Hypochondriac* when the *Delirium* is accompanied with Fear, so that it may be smother'd any longer, but it finally breaks out. And he says, that the *Hypochondriac* Melancholy differs from the other only in blaming a vitious Effervescence chiefly when the *Succus Pancreaticus*, becoming more acid and stercoraceous, and mixing with Phlegm, disturbs the Animal Spirits; and this he commonly calls the Fund of all Calamities, and great a Plague to the Body, as *Cicero* makes *Carilin* to the *Senate* of Rome.

§. 10.

Crates and his Followers say, that nothing is more equally distributed amongst Men, than the Soul, but that it is variously disposed, and exercises several Operations by Reason of its Quantity. And that therefore many Disorders are ascribed to the Soul, ought to be imputed to the Indisposition of these. Likewise, from this Reason, that Man ought

blamed who has bad Parts or an unhappy Memory. Which they move from Infants, who have the fine Soul then, as when they become old: All the Difference being, that in Infancy the Organs are soft, tender and mucilaginous, and likewise the Brain and Nerves are so soft, that the Impressions made will not last, and therefore the Soul cannot be distinctly perceived, and carried to the *Glandulae*, until such Time as the Melancholy Organs are more firm and strong, then they begin to ratiocinate more, and to think more distinctly. In the Manner by reason of the same Organs being weakened in old Men, we find that their Wit, Memory is, and Sight is hurt and decayed, and that they return to their former Infancy again; Which cannot be through the decay of the Soul or Mind, which is immutable, but because their Organs (I suppose the Brain) are so dried, that the Impressions cannot be rightly made, and therefore the Soul is not able to judge distinctly of them: whence comes that Saying, *If an old Man had a young Man's Eyes, he would See as a young Man does.* But the Parts of the Eyes being dried and changed in old Age, must necessarily Cause a Diminution of Sight. To come closer to the Business, As long as the Parts of our Machine are disposed according to the Laws of Nature, and the Filaments are gently and lightly struck upon, so long do we act according to those Laws. But when those Filaments are out of Order, and are beat too violently, then begins a *Delirium*; just as an Instrument sounds melodiously when all its Strings are in order, and tuned according to Art; but if any one be indisposed or not

rightly Strung, then the whole Harmony is spoiled. They say too, that the tough, thick and feculent Intemperature of the Blood proceeding from a vitious Acid, does remotely contribute to this Malady; for by this Intemperature the Animal Spirits become darkned. Now to various Thoughts, are required Spirits variously disposed: Thus if they be too fine and subtil, the Judgment is extremely weakened; if they do not move regularly, divers *Delirium's* follow upon it, with Laughter, Dancing, Thoughts of Veneries, and other pleasant Conceits. But if the Animal Spirits be gross, then the Melancholists move slowly. And these Spirits having once got into the Passages or Tracks of the Brain, and reflected back, represent the same Image to the Mind; from whence they also think, that the Thing they have once conceived is always present with them. And therefore it is, that those that are Melancholy sometimes imagine they see the Devil in this or that Place, and this happens when the Animal Spirits, that are very gross and move slowly, light into those Tracks which were formerly made by the same Impression, as when the Image of the Devil has been presented to them with the Horns of a Bull, a Lyon's Breast and Tail, the Reflection from those Impressions upon the Soul through the Swiftneſs of the Thought causes a Perception of all these things, and forms one *Idea*. They say that the Case is the same in such as have a Fever, who sometimes imagine that they see Flies and several Creatures before their Eyes; for the Animal Spirits are then so determin'd, as they were when those little Animals were

were really present, and so represent the same *Idea* to the Soul. And as in Dreams many things are presented to the Mind, by the falling of the Animal Spirits into those Tracks that were formerly made; so it is with melancholy Persons, who, while they are awake, are as if they were in a Dream.

§. II.

WE will now give our own Opinion, and steer our Course as even as we can between the two preceding ones. It is most certain that the Animal Spirits, being defiled by some sparks arising from a vitious Acid, do hereby become slow and gross, and creep at their pleasure through those Passages of the Brain they find the most open; which when they have once entered, by reason of their Gravity they cannot easily get out of, but, as if they were plunged in the Mire, are forced to stick there. Hence it must needs follow, that one and the same *Idea* must always be present. In like Manner, seeing that the Spirits do not flow into the rest of the *Viscera* as they ought to do, those *Viscera* must needs be destitute of their Volatil Ferment, and instead thereof have another strange, wild, vitious Acid, which lies and is encreased sometimes in the Spleen, sometimes in the Stomach, sometimes in the Mesentery, sometimes in the *Pancreas*, and other Parts of the *Hypochondria*, or in some small Vessel. Many of our Countrymen take these *Viscera* to be the Parts affected, and strongly maintain, that the Cause of the Distemper lyes in them, whereas the Disease is rather produc'd by a super-abounding Acid. We confess the Spleen is not to be altoge-

ther excused, because the Spirits ought to pass through many Nerves, which Spirits they are vitiated, and become slow and unactive, the ferment of the Spleen must needs be spoiled, and false Imagination concerning any thing may also be the Cause of Melancholy, and hence comes that deprav'd Judgment, when the Person thinks she perceives Causes of the Body, which are within, when a poor Man imagines himself a King, he does really at that time perceive in himself the Idea of a King, but there's a wrong Application in that he does not think himself to be so. Thus, in a good and healthful state of the Body, the *Idea* of a King by a particular Motion of the Spirits, being presented to the Mind, makes the Person and perceive that it doth really is a King; so likewise in a melancholy state, if such a Motion of the Spirits arise, it also Judges, either it sees, or, is a King: which Application may happen when we are solicitous for any thing, and it always before our Eyes: this Attention, raises a peculiar Application of the Spirits in the Brain, and so carries it through the Nerves, by which Disorders and Fermentations of the Spirits in the Blood are spoiled, and that again produces worse Spirits, so the Thoughts are depraved.

All the *Phænomena* of this Distemper may be well explained by the Animal Spirits, which are usually and in a healthful Body bright, brisk, and enlighten the parts thereof; but if they become lazy, and unactive, and are converted to an Acidity, and do not enter so speedily pass through the whole Frame of the Brain

ly, but rising up in the middle
furiously and blindly carry'd in-
the next Pores and Passages; then
become a Melancholick Person walks sad
and heavy, imagining and speaking
many absurd and ridiculous things.
and in whatsoever Passage of the
these slow and lazy Spirits
they are wont to stick there
cause of their Grossness; which
the Reason that an *Idea* once con-
firmed is not easily obliterated, but
the same Object continues present
to the Mind, and the affected Per-
son continues fixt upon some Trifle
the neglect of his more weighty
concerns. If any one fancy him-
self a King, a Prince, a Cock, a
Cat, &c. he must necessarily imi-
tate their Gestures, because the
Spirits being dull and sluggish, are
only intent upon making out that
which they have once feign-
ed; and therefore he that thinks
of himself a Dog, will forthwith bark
and imitate a Dog, which Symptoms
have observed by the taking a
Cure. And so of the rest.

§. 12. Prognostick.

AS to the *Prognostick* of this Di-
sease, it is usually Chronical,
and very hard to be cured, and may
well be call'd the *Opprobrium Medi-*
cum, or Disgrace of Physicians,
when so many Medicines are usual-
ly given without Effect. For the
Viscera, the Shop where Fermenta-
tion is made, by reason of the
thickfulness of the Animal Spirits,
are almost defrauded of all their
natural Ferment, the restitution of
which is so difficult, that a consi-
derable time is requir'd for the
effecting of it. The greater Part
of the Animal Spirits are often al-
so lodg'd in the Pores of the Brain,

and the other few that are left be-
come furious, from whence pro-
ceeds an Epilepsy or Convulsion.
And sometimes the Passages of the
Spirits are quite shut up, upon
which happens an Apoplexy; but
if one Passage only to the outward
Parts be obstructed, thence comes a
Palsy. Melancholy of a long stan-
ding, sometimes turns to Stupidity,
when the Animal Spirits have
block'd up all the Passages, and
cannot extricate themselves. Again,
sometimes this Disease turns to
Madness, through the Inflammation
of the Animal Spirits, which run
thorow unusual Tracks and By-
Paths, and cause those Symptoms
which are so common in mad Men.
The Spring contributes much to
Melancholy, as making new Fer-
mentations in the Blood. Autumn
also does the same, because in
Summer the Blood is despirited,
and therefore, because of that and
the ensuing Cold in Autumn, be-
comes thicker. It is much the
same case, when melancholy Per-
sons have drunk too much Wine;
for when the Blood is brisk and
spirituous with Wine, they are
very merry, but when those Spi-
rits are gon off, and they left to
themselves, they grow Melancholy
again.

§. 13. Dietetic Cure.

AS to the *Dietetic Cure*; Let
the Air be clear and tempe-
rate, by which the Animal Spirits
are rendred lightsom and brisk;
and therefore it is that those that
live in such an Air are merry and
chearful, but become sadder than
ordinary, and find a lassitude on
themselves in that which is thick,
cloudy, and foggy. For when the
Air

Air is clear, the subtil Matter is let in, in greater Quantities, by which subtil Matter the Animal Spirits are cheared; but if the Air be thick, the Spirits are gross and cloudy too, and less fit to offer any *Idea* to the Mind, to which, brisk, lively, lightfom, volatil and active Spirits are requir'd. Now when these gross Spirits have once took up their Stations in the Brain, they cannot well pass another Way, because of their Grossness; and this is the Reason that melancholy Persons commonly think only upon one thing, and always harp on the same string; For those dull Spirits continually keep the same fear and *Idea*, and therefore it is that those People are seldom Melancholy, who live in a subtle warm Air, as we may observe amongst the *French*. But the *Beotians*, who live in a thick Air, are heavy, slow, and dull, which occasion'd that of the Poet,

Beotum crasso jurares aëre natum.

And we may observe the same in the *Germans*, who live in a cold thick Air; as also that they are more obnoxious to these Diseases than other Nations who live in a hot and subtle Air.

Let the *Meat* and *Drink* be of good Nourishment and temperate, as Hens, Mutton, Veal, Beef-broth, potch'd Eggs, and other such Meats of easie digestion. On the other hand, Meats that are hard, and of less Nourishment, as Flesh and Fish salted and dry'd in the Smoak, and almost all sorts of Pulse; also Geese, Pork, Hare, Venison, &c. are to be avoided as dangerous; for such as the Chyle is, such is the Blood; such as the Blood is, such are the

Animal Spirits, which if generated of a thick viscous Matter, they cannot be brisk enough to fit to do their Duty. Thick gy Ale, neither well brewed nor fermented, must above all be avoided; neither is it good to drink too freely of strong Wine, as is evident from hence, that poor Wretches being drunk are prone to run mad, and to cut their own Throats. On the contrary, in stead of ordinary Drink, appropriate Decoctions, and Nitrous Mineral Waters, may be used; for hereby they are brought rightly to perform their several Offices, by the Assistance of other Spirits that assist them, and are gently called to do their Work in their proper Sphere, out of which they are wandred.

Sleep and *Watching* must be moderate. For too much Sleep lets the Animal Spirits deeper Passages of the Brain, and makes them more dull. And so of *Watching*, If it be immoderate, it tries and dissipates the few remaining Spirits.

Let the *Exercise* be moderate, especially after Supper. For too much Exercise, which is immoderate plain Exercise, dissipates the volatil and moving Spirits. The same Moderation must be used in *Rest*, for by too much *Rest* the Animal Spirits are kept in the Brain, that they cannot be recalled to their wonted Offices.

Amongst the *Passions* of the Soul, Mirth and Jollity must be all sought after. Therefore, the Company, Musick, Hunting, and other Recreations, are very necessary in this Case. On the contrary, Care, Grief, and Sadness are to be avoided; for the

its are hereby disturbed, and
 upon the globous Part of
 Brain, excavate the Frame
 of, and do thereby often be-
 come the only Instruments of this
 Distemper.

As to *Evacuations* and *Retentions*,
 let the Belly be kept loose, that
 never flows to the Intestins
 may be carried off; lest it should
 stay there and simple
 with, contract a putrefactive
 ferment in the first Passages. If
 the Body be not naturally open, it
 must be procured by Art. Let the
 Urine, *Lothia*, or Child-bed-Pur-
 gations, and the accustomed He-
 morrhoids be agreeable to Nature.
 If the Obstruction of these does
 very much defile the Animal Spi-
 rit; from whence it necessarily
 happens, that diverse sad Phantasms
 must needs be raised in the Brain.

14. *Pharmaceutic Cure.*

WE now pass on, as our Me-
 thod requires, from the
 Dietetic to the *Pharmaceutic* Part;
 where there is most hope of Recovery
 when both these are called in to
 assistance. The Ancients, com-
 monly call'd *Galenists*, order, if
 Melancholy be universal, that
 in all the Veins of the Body, the
 Vein *Mediana* of the left Arm to be
 cut; or, if the Spleen only be
 affected by some Melancholy
 Humour, they cut the lower Vein
 of the Arm, which they call the
 Vein *Porta*; and if they have been
 accustomed to have the Hemor-
 rhoids, they open the Hemorrhoi-
 dal Veins about the *Anus*; but
 when Women have this Distemper
 the Reason of the Obstruction of
 their Courses, they use to provoke
 them by Venesection in the Foot,

and other Blood-evacuating Medi-
 caments. When the Brain alone
 is distained with this vicious me-
 lancholick or atrabilary Humour,
 especially when the Body is Pletho-
 rick, they open the *Vena Jecoraria*
 of the right Arm, or the *Cephalica*
 of the left. After that they use
Preparers, as Roots of Succory,
 Borrage, Capers, and Fennel;
 Penny-royal, Centaury the lefs, Rai-
 sins, &c.

After that they use *Evacuators*,
 as Clysters, Apozems and Pills, To
 concoct and carry off the Humor,
 they mix *Preparers* with *Purgers*;
 an Example of which, for the sake
 of young Physicians, upon the Cre-
 dit of the *Galenists*, we will here
 set down.

Take of Baum, Berony, Borrage,
 Hops, Hyssop, Maiden-Hair of
 each an Handful, Roots of Suc-
 cory, Borrage, Fennel, Barks
 of Capers of each three Drachms,
 Citrons, Leaves of Senna, *Epi-
 thymum* of each three Drachms,
 Seeds of Annise, wild Carrot,
 Fennel of each two Drachms, of
 Currans one Ounce; being brui-
 sed and cut, boil them in four
 Pints of Water, to which squee-
 zed and strained add of the
 Juice of sowre and sweet Apples,
 Pomegranates of each half a Pint,
 of Fumitory, Borrage, Roses of
 each six Ounces, white Sugar
 half a Pound. Boil and clarify
 it with the White of an Egg,
 and make an Apozem. Of
 which give Morning and Eve-
 ning from three to four Oun-
 ces at a Dose.

Their stronger Purgers are those
 they call *Melanagoga*, or such as
 expel black Choler. Such as are
 Extrac

Extract of black Hellebor, *Diafenna*, *Pilula Indæ, de Lapide Lazuli*. Amongst which they commend the following Infusion.

Take of black Hellebor prepared one Drachm, Leaves of *Senna* half a Drachm, Anise-Seeds one Scruple, Cinamon half a Scruple. Macerate them in six Ounces of Goats Whey, after that boil them, and to the Colature add of *Electuarium Diafenna* half an Ounce. Mix them. Or, Take of Lenitive Electuary, *Diacatholicon* of each half an Ounce. Dissolve them in Water of Fumitory, and let it be given warm in the Morning six Hours before Dinner.

And seeing that they think this melancholy Humor (which they take to be as tenacious as Pitch) cannot easily be carried away at once, they therefore often repeat their Purgers. But some days after they endeavour to recreate the Brain and Animal Spirits by *Strengtheners*. To which end they commend the following Medicin, and such like.

Take of Conserve of Bugloss, Baum, Fumitory of each half an Ounce, *Species Diamoschu dulcis*, of Pearls, *Diamargariton frigid.* of each half a Drachm, red Coral prepar'd one Scruple. With Syrup of Plums make a soft Electuary, of which let the Sick Person take the Quantity of a Nutmeg two Hours before Dinner.

In this Case also, especially if there be no Heat, they commend a Drachm of *Theriaca Andromachi* dissolv'd in Fumitory-Water or

some other destilled Water, they advise also Cuppings, Tumes, Frictions, Cauteries, divers such like external Applications to avert the peccant matter. With infinite other which it will be too tedious to relate.

§. 15.

Paracelsus wonderfully as a great Secret, both forventing, and also for curing Disease, the Flowers of Amalgam to be given twice, thrice Times in a Morning, in a Quantity of Treacle, as it requires. He commends the Tinctures of Metals, especially *Luna* and *Mars*, as also the Tinctures of Emerald, Sapphiral, &c. which he thinks good if only hung about the Neck. But I will forbear to sack any further the Books of Paracelsists, seeing they are of opinion that these already mentioned do far exceed all others.

§. 16.

Helmont thinking the Disease lies in the Stomach and about it, does therefore believe that it should be cured by Stomachics not Cephalics, that the Argument brought contrary concerning Hellebor to the Ground; for he assigns it a peculiar Virtue for a more not in that the intoxicating hurtful Quality reaches the Stomach; for after it is thrown out of it, such a Reaction follows as is usual in Colick; which is a Sign

er, Virtue is not carried into the
gs, Head, but other Members.

ris, So that black Hellebor, in his
l App Judgment, helps Madnefs, because
can eases the Spleen, and Fevers of
er the *Pracordia* of the Ancients, and
ted, o dispossesses the Enemy better
than all other Vomits commonly
known. This we must confefs by
the by, That as in other Places, so
also in this *Helmont* is so very ob-
served, that the Reader may be in
the same Condition with *Appion* the
Grammarians, who would have rais'd
the Ghost of *Homer* to ask him his
Country and Parentage.

§. 17.

Wallis, after his usual way,
does very elegantly han-
dle this Disease, the Substance of
whose Opinion we will in short lay
down. He has three primary Indi-
cations; First, the *Curatory*, which
immediately respects the Disease,
and its Conjunct Cause. Secondly,
the *Preservatory*, which considers
the *Procatartick* and Evident Cau-
ses. Thirdly, The *Vital*, which
concern'd in preserving the
strength.

As to the *Curatory*, Let the more
dull or dejected Animal Spirits
be volatiliz'd and corroborated, that
forwards they being the more
easily expanded, may irradiate
the whole Brain, that it may per-
form the several Acts of Imagina-
tion, Judgment, and of the other
principal Faculties; and may so
powerfully actuate the *Pracordia*,
the Blood being plentifully
filled, may be sent from thence
through the whole Body without
stop or stay; which Spirits are
cured by Admonitions and coun-
selling Management of the distem-

per'd Person. The Mind must al-
so above all Things be free from
that cursed Passion of Love, Sad-
ness, Hatred, Fear, &c. Likewise
he would not have melancholy
People left alone, but those who
take delight in serious Business,
should be permitted some gentle
Employment. But if, being sedu-
ced by Phantastic Illusions, they
imagine prodigious Things of them-
selves, and firmly believe them,
they are to be brought out of such
Thoughts by some ingenious Trick:
Many Examples of which Cures he
says, may be found here and there
amongst the Books of Practitio-
ners.

The same Author tells us, That
a new Melancholy is cured some-
times purely by well ordering and
managing the Mind, and the Ani-
mal Spirits; but that one of a long
standing, when the Animal Spirits
have contracted a sharp Quality,
and the Blood an atrabilary Dyf-
crasy, and when the Pores and
Passages of the Brain are already of
an ill Figure, is harder to be cured.
But in all Sorts of Melancholy,
whatever the Cause be, he thinks
Blood-letting is very Efficacious;
because when the adust and decay'd
Blood is by degrees carry'd off,
always better and more spirituous
comes in its place. A Vein may
be cut either in the Arm, or the
Foot, or the *Salvatella*, if the Me-
lancholy Person choose that before
any other.

He says, the frequent opening
of the Hemorrhoid Veins is of ex-
cellent Use, which, as the venera-
ble *Hippocrates* observes, if they
bleed of themselves, the Disease is
thereby often cured.

As to *Evacuation*; He thinks it
best to begin with it, because it
removes

removes that which feeds the Distemper from the first Passages, and makes way for other Remedies. But he does not allow of Evacuators that are strong; because they do not take away the Cause, to wit, the Dyscrasy of the Blood, but rather encrease it, and do but more weaken the Animal Spirits which are already dejected. And he says, the Ancients prescrib'd Hellebor, because they knew not any other Purgers at that Time. At the Beginning of the Disease he also prescribes Vomits, as he does in other Cephalic Distempers; for by these the viscous Filth of the Stomach, that often oppresses the Mind, is carried off, which being discharg'd, the Animal Spirits can more freely and chearfully expand themselves. There are also many Times some heterogeneous Particles in the Gall-Bladder, *Ductus Pancreaticus*, and other Glandules of the Mesentery, which by Vomits, are prevented from getting into the Head. *Ex. gr.*

Take of *Oxymel simplex* one Ounce and an half, *Oxymel* of Squills an Ounce, Syrup of Tabaco two Drachms. Mix them for a Dose. Or, You may give a Decoction of the middle Bark of Elder, with one Drachm of Salt of Vitriol.

To those that are strong and sound, he gives an Infusion of *Crocus Metallorum*, also the Emetick Tartar of *Mynsicht*, and Sulphur of Antimony.

Amongst Catharticks he extols the following Apozem, to be took for some days.

Take of the Roots of Polypody the Oak half an Ounce, *Leumum* two Drachms, *Leumum Senna* half an Ounce, *Tamulus* six Drachms, Coriander three Drachms, yellow Saffron two Drachms. Boil the fourteen Ounces of Spring Water, till four be consumed, adding of Agarick two Drachms, Rhubarb two Drachms, and half. To the Colature add of Syrup. de Pomum two Ounces. Mix them, and the Sick Person take four Spoonfuls of this once in the morning for four Days.

Amongst Pills, he commends *tartar. Quercetani*, or, *tartar. Cratonis* half a Drachm, *Jalap* six Grains, *Tartar. Emeticum* half a Drachm, *Gum. Moniac* dissolved in Water, as much as is sufficient. Make or five Pills to be taken before Bed.

Amongst Powders, he commends before all others that of *Diarrhina* and *Diarrhina* with Rhubarb. he does sharply reprove the Ancients abusive Use of Purging, thought there went no more in the curing of this Distemper. Purging away the Atrabilious humor. But he lays more stress on other Medicines; for he says that Melancholists are always ill after Purging, and that they find any good thereby, seeing he ascribes the Cause of the Distemper to the Dyscrasy of the Blood and Spirits, and ill of the Brain, he puts all strengthening Remedies in the first Rank, and upon Account sometimes uses

His choice altering Med-
are these which follow.

of the Conserve of Clove-
lily-Flowers, Borrage of each
two Ounces and an half, Myro-
balan Peels candied six Drachms,
Coral prepared one Drachm and
an half, Pearls half a Drachm,
Ivory, Crabs Eyes of each one
Drachm, Confection of Hyacinth
two Drachms, Syrup of Coral or
Poppy as much as is suffi-
cient. Make an Electuary, of
which, let the Patient Evening
and Morning take two Drachms
drinking upon it a Dose of the
following Julap (or any other
appropriate desill'd Water.) Or,
Take Cowslip-Water, black Cher-
ry Water of each two Ounces,
Tartarum four Ounces, Sugar six
Drachms. Mix them, and make
in Julap.

Amongst Alterers he also reckons
Iron Spaw Waters, which are
nt to cheer Melancholy Persons
mainly. For if they be plenti-
ly drunk, they wash away the
sulphureous Tincture of the
Blood, and destroy its bad Fer-
ment, cleanse the Bowels, and
remove Obstructions. Besides, by
their binding Quality, they streng-
then the Viscera that are too lax,
also close the Orifices of the
Vessels, which open into the Brain,
so that an extraneous Matter may not
pass into it along with the ner-
vous Juice. And for this Reason,
because they strengthen the
Vessels, and shut up the Passages
into the Brain, Vitriolic Prepara-
tions of Iron are usually given with
Success, both in Melancholy,
and in a Vertigo. Which very
of the Author I thought fit

to set down here, because of the
pretty Account he gives of the Use
of Vitriolic Waters, instead of
which he sometimes uses Chalybeate
Remedies. Put one Ounce of the
Filings of Steel in a Glass, with
two Ounces of Juice of Oranges.
Let it stand a whole Day, stir-
ring it now and then. Pour upon
it Water of Apples and White
Wine of each one Pint, or of small
Cyder two Pints. Let three Oun-
ces of this be took twice in a Day.
He usually also gives this following
Steel-Powder.

Take Vitriol of Mars, Cream of
Tartar, Crabs Eyes of each one
Drachm. Mix them, and make
a Powder to be divided into nine
equal Parts, one of which may
be took every Morning in some
proper distilled Water.

He says Whey, provided it do
not hurt the Stomach, being drunk
plentifully for several days, does,
like Iron Waters, wash away the
salt and sulphureous Particles of the
atrabiliary Blood, and that he has
often found it successful. Whey of
Goats Milk with *Epithymum* infused
or boiled in it, is also commended
by him.

He has an excellent Broth of the
Decoction of a Chicken, with the
Roots of Polypody, Chervil, Fen-
nel, Butchers-Broom, Leaves of
Spleen-Wort, Harts-Tongue, which
the sick Person must take in the
Morning with Vitriol of Mars from
six to ten Grains, and in like Man-
ner Salt of Wormwood and Cream
of Tartar of each one Scruple.

He thinks the Juices both of
Splenetic and Antiscorbutic Herbs,
drawn and distill'd, do wonder-
fully contribute to the correcting

of the atrabiliary Dyscrasy of the Blood.

He says, That basking in fresh Water in the Summer Time is very good, in that it washes out the Filth that is got into the Pores of the Flesh, and excellently procures an insensible Transpiration.

When the sick Persons cannot Sleep, or are decayed with long Watchings, and thereby become worse, he advises to have recourse to gentle Hypnoticks; as a Decoction of the Flowers of Primroses, Lettuce-Leaves, or distill'd Water of red Poppy or its Syrup. Furthermore, he thinks that Emulsions of the Seeds of white Poppy, Syrup of *Meconium*, and other things which are benign and cheer the Spirits, are very good.

§. 17.

WE now proceed to *Sylbius*, who, to correct and temper that acid Humor, commends all Aromatic Things, and such as abound with fixt and volatil Salt, because by them the Acid is usually concentr'd and weaken'd. Spirituous Things have also the same Effect, especially when joyn'd with Aromatics; as likewise fat Things, provided they be volatil and Aromatic; and also watery things, as Emulsions, all which do gently and efficaciously correct, curb, and amend that austere Humor, which for the most part gives the Disturbance in this Distemper. Nor are volatil Salts at all inferior to these in Virtue; and amongst the rest the Spirit of *Sal Armoniac* joyn'd with other Aromaticks, especially its volatil oily Salt. Hydragogues carry off and abate this austere and acid Humor that troubles the Spirits,

which is in some Measure but is too redundant; such as the Roots, Barks, Leaves and Berries of Dwarf-Elder and Elecampane, of *Carthamus*, Roots of Marsh-Mallows, and Jalap, *Gummi gutta*, &c. A Dietetic Cure, who are more serious may consult the Author himself.

§. 18.

Cartes and his Followers think they may incide, and volatilize the gross and turbulent Blood, which produces the Animal Spirits of the same kind with it self, and that they may digest every vitious Acid, and break it by such Animal Spirits as give more and fitter for the performance of several Operations may be directed, give Altering Medicines, which usually consist of much volatile Salt, such as all spirituous Things are: For seeing the Phlegm of this Disease depend for the most part upon a state of Fire, the conglomerated Part of spirituous Bodies become hard rubbing one against another, therefore they distil the Bettony, Scurvy-Grass, Broke Chickweed, and such like, because a tough and clammy Matter often offends, therefore frequently prescribe the following Mineral Waters which are impregnated with Iron, Vitriol, &c. by which the glutinous Part of the Blood is corrected; the Metallic Parts can permeate the strictest Passages and Pipes of the Body, and dissolve those humors, that obstruct them. Preparations of Iron do much help to correct and diminish Acidity in the Blood;

of Mars; for if they be taken inwardly, the vitious Acid gets them, and so a third thing is produced, and the Acid is quite d up. The *Cartesians* might commend Vomits to carry off *Mucus*, which often lies in the Passages, and sticks usually to the Coats of the Stomach, and hinders the Fermentation; for by shaking this *Mucus*, they easily tear it and throw it out. Others think *Emonics* bear away the Bell; as *Emetic Tartar of Myrsicht* given in two to four Grains. And they commend Sulphur of Antimony, *fameich Preparation Willis* hath. At night other Purgers, they prescribe the Extract of black Hellebor, to be given to the Quantity of a dram. To strengthen the Brain may be gently bind its Pores that are too lax, they magnify the Tincture of *Lapis Lazuli*, Coral, *Perls*, and the like, all which it should be too tedious here to set out.

§. 19.

Our own Method, in short, of curing this Disease, is, to brace up and clear the Animal Spirits, that are quite dejected and pressed by acid, sharp, and thick Particles; and to cast out the slow and dull Spirits which are lodg'd in the Pores of the Brain, that are taken up with other
Our Way of Cure is to breath a little in the lower Part of the Body, let out the thick Blood. After we think our greatest Care to be to correct that clammy Acid, which disturbs the Animal Spirits, that thereby they may be upon their respective Offices;

And this is to be done with *Alkali's* both fix'd and volatil; but the volatil are much the best. being very fit both for absorbing the Acid and dulling its Points. And this is the Reason why volatil Salts, which correct the gross and feculent Blood, are found so advantageous to melancholy People. But seeing the Particles of the Acids are so various as to be sometimes edg'd like Swords, or Knives, sometimes pointed like Pins, or Needles, &c. therefore there ought to be divers Antiacids or Remedies against them; and hence it is that in this Distemper the Medicines are so often chang'd. To subdue this viscid Acid which sometimes is seated about the *Hypochondria*, Mesentery, Milt, &c. We commend Myrrh, and *Tinctura salutis*, which is prepared of it; for this removes all corruptive Sowreness, and by its Balsamic Virtue expels any Putrefaction. To this we do not think our *Elixir Polychrestion* inferior, which is prepared of Myrrh, Aloes, and Saffron, with the Spirit of Wine tartarified, and Oil of Tartar per Deliquium; for it has been try'd a thousand times with Success. Earthy and fix'd *Alkali's*, such as are, Crabs-Eyes, Pearls, burnt Harts-Horn, Coral, &c. as they drive away and destroy the foreign Acid, will be serviceable. Vitriol of Mars is of great Virtue. The following Prescript is very potent in expelling this inimical Acid.

Take of Cream of Tartar 1 drachm,
Vitriol of Mars, Crabs-Eyes finely powdred of each one Scruple, Pearls half a Scruple. Mix them, and make our absorbing Powder.

The following Remedies are of the same Nature, but something stronger, as *Elixir Proprietatis* of *Paracelsus*, Tincture of Castor, Amber, &c. We give you this Prescript.

Take of the Spirit of *Sal Armoniac* half a Drachm, *Spiritus Carminat.* one Drachm and a half, Tincture of Castor, Cinamon of each a Scruple, of *Mars* half a Drachm. Mix them, and give twenty Drops at a Time.

Tincture of *Mars* prepar'd of the Juice of *Borsdorian* Apples, may be given in a proper Vehicle, as some destill'd Water, &c.

We cannot forbear reproving many Practitioners of our Times, who think to correct this vitious Acid with their opening Syrups, and other sweet Things, when they rather do hurt with them; which the dainty and nice People would omit, if they did consider, that they do not thereby dulcifie the Blood, but rather encrease its Acrimony. *Piso's* Observation makes the case clear beyond Dispute, where he tells us, That the Juice which Sugar is made of, when it is out of the Cane, turns sowre in a very little time. But all volatil acids are good in this Case. Amongst the volatil acid Spirits *Tachenius* reckons the alcalifated Spirit of Wine, which is made of the common Spirit of Wine in a Copper Still, without any Addition either of Ashes of Liquid Tartar, or common Salt, as it is wont to be made by some. The tartarified Spirit of Wine prepar'd as follows, does Wonders in this and other Distempers. Expose to the Air, when the Season is extream cold, some rich Wine in a convenient Vessel, to be frozen, make a

Hole with a Stick in the Ice, so pour forth the Liqueur, which will not congeal'd into another, which must be set to freeze again. This do till the Liqueur becomes dens'd, and you will have an admirable tartarified Spirit of Wine.

Sugar is so far from being true sweetness, that it dissolves Antimony it self, with which it may be mixt, and leisurely digested three days together, yields a fragrant Oil of Antimony, or Spirit, very good for Burns, &c. also find good Success with a fragrant Tincture of Coral, which is calcin'd with Sugar.

When the Enemy is fixt, it is to be cast out of the Body, seeing that it often exercises its Rannny in the Stomach, *Glandulae Pancreaticae*, and other Parts, to be expell'd thence by *Emeric Tartar*, our own Wine, &c.

Take of Antimony prepared an Ounce, *Cassia Lignea* half a Drachm, the best *Rhizoma Galangali* half a Drachm and an half, *Aromaticum* one Drachm, *Galangal* of each half a Drachm, Cloves a Scruple, *Cinnamon* a Drachm, white Sugar a Drachm, Rhenish Wine sixteen Ounces. Let the Dose be from half an Ounce to half an Ounce.

We commend Antimony in this Disease above all other Remedies, because they mightily dilute and make fluid the Humors, &c. a kind of Political Cure: For they very much tincture and corrupt the Humor, so that the humors appear green, &c. seeing them of that color,

the vicious Matter is carried off, whereby his melancholy Fancies and Imaginations cease. These Medic and Cathartic Medicines will be pretty strong, or else we must not think they can irritate the sensible Parts to such a Spasmodic Contraction, as to shake off the clammy, glutinous Matter, which often sticks to the Sides of the Stomach; to which end they may give this which follows.

Take of the Juice of the middle Bark of Elder an Ounce and an half, Salt of Vitriol half a Scruple, Syrup of Fumitory one Ounce. Mix them.

Amongst Specifics is reckon'd the Extract of Hellebor, given in the Quantity of half a Drachm, especially corrected with the Spirit of Vitriol: He that does not use this Extract may have a gentler in its Room, as the Extract of Irons to four Scruples, or an Infusion of the Leaves of Senna, and Barb, with Salt of Tartar, or a decoction of Raisins with Leaves of Senna, a Pint and an half for several Doses; or the following Pills, which yet are not so proper for dry constitutions.

Take *Extractum diacatholicon* half a Drachm, Magistery of Luna half a Scruple. Mix them, and make Pills to be took at Night.

We do also with good Success give several Clysters of Cathartics that qualifie the Acidity, and at the same Time loosen the Bowels, and make the Mucus fluid. There is a Specific virtue in Antimony against Melancholy, and no-

thing so much purges it, as Antimony does. We may use Infusions and Medicated Wines. Purgers are best insus'd in Whey, or its Water, or in Water of Apples, with May Dew, and distilled. After Purging we must proceed to Specific Alterers, which rouse up, and set the Animal Spirits at work. To this End we use to mix Steel-Medicines with the Volatils above commended.

Take of Spirit of *Sal Armoniacæ* with Amber half a Drachm, *Spiritus Carminat.* two Drachms, Tincture of Castor, Cinamon of each one Scruple, of *Mars* half a Drachm, Water of Fumitory, Centaury the less of each two Ounces, Syrup of Cinamon half an Ounce. Mix them, and give them in a Glass.

The Essence of Fumitory, and its Juice may be taken for some days in Whey; for Fumitory will not admit of long boiling, because of its volatil Salt.

The Antimoniate Tincture of Tartar, the Essence of Steel, the simple Tincture of Tartar, &c. are preferred before all other Alterers.

Several Distillations of Juices, Whey, and such like, are proper; especially Iron-Waters which may be artificially prepared of Steel and *Clyffus*, of which see *Schroder*. As to Mineral Waters we chiefly commend those of *Schwalbac* in Germany, which upon many Trials have been found to do much good; for they correct the vicious Acid, cut the clammy Matter, humor and bridle the disorder'd Spirits, amend the faults of the Fermentation, and are often a present Remedy. For no one doubts that

Sickness as well as Health, does either immediately or mediately depend on the Fermentation of the Blood. Camphore is better than *Opium*, because it has more subtle Parts, and sooner flies away. If it be suspected that the Patient has had a Philtre given him, let him, after a Vomit, take Powder of a Secundine with Treacle, also the Magistery of Mans Scull, and the Electuary of *Hartman*.

As to the Chirurgic Part we commend, with the famous *Ettmullerus*, the Infusion of several volatile and other Liquors; but seeing that this excellent Man has discoursed copiously upon this Subject in his Disputation concerning *Infusory Surgery*, we refer the curious Reader thither, that we

may not be tedious. We have over and above added Instance, That we, with success, once infus'd *Tincture of Mars* several times into the Brain of a certain Man, who was afflicted with Melancholy. Yet I know not if any, that have been so cured, that durst for fear of Contagion, Tryal of it.

We have often advised the opening of the Hemorrhoidal Arteries of the Temples by the Application of Caustics, with great Success; for bad Cases are always succeeded by better the Chyle: But there must be some regard be had to the Patients Strength, and other circumstances.

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CHAP. IV.

Of Madness.

§. I. Definition.

MAdness (by the Latines call'd *Furor* or *Insania*) is commonly defin'd; A hot Distemper arising the Substance of the Brain, without a Fever, by which the Imagination and Reason is hurt, Memory many times being un-dermin'd. We had rather define thus; A *Delirium* with an extraordinary Wildness, and Alienation of Mind, without a Fever, used by the Extravagation and irregular Motion of the enflamed Animal Spirits. These Diseases, *Frenzy*, *Melancholy*, and *Madness* are near akin, in all which the Reason is disturb'd.

§. 2. Difference.

They differ thus; a *Frenzy* has always a burning Fever along with it. In *Melancholy* and *Madness* the Ratiocination is affected, and the Patient speaks, acts, and judges absurd, impertinent Things; and those that are mad, are far more turbulent in their Anger, Excrescences, Brawlings, Shoutings, and dreadful Looks, than melancholy Persons are; so that some may define and describe Madness to be,

A strong *Melancholy*. Again, *Melancholy* is accompany'd with Fear and Sadness; but *Madness* is attended with Boldness, Raging, and without a Fever; yet they are changed one into another: For this Smoak will easily take Fire. Thus, the Animal Spirits in *Melancholy*, are as it were darkned with Smoak; in *Madness* they seem to be in a perfect Flame. Those that are mad are as desirous to bite as mad Dogs, and ravenous Wolves, and so this Distemper is call'd for that Reason, *Cynanthropia*, & *Lycanthropia*, *Demonium Caninum* and *Lupinum*. Nor is it any Wonder they do not spare others, when they, many Times, lay violent Hands upon themselves.

§. 3. Part affected.

THE *Part affected* according to the Ancients, is the Brain, which they prove from the principal Functions of the Soul being hurt; and so they say the Brain in this case is affected, either Primarily, or by Consent. Some take the Soul it self for the Subject; for *Cartes* supposes two Substances in Man really distinct, one *Immaterial*; the other *Material* or *Organical*, which yet are both so closely, and

intimately joyn'd and united, that the Animal Spirits discharge all their Offices and Motions at the Command of the Soul: and these he thinks in this Case to be affected.

Willis takes the Animal Spirits, declining from their natural and genuine Temper, and becoming like Stygian Water, and also the Brain too for the Part affected.

But We imagine the Seat of this Calamity to be all the Pores of the Brain, in which *Idea's* are usually formed, and the Spirits are lodg'd.

§. 4. Signs.

THose that are taken with this Disease seem to be as mad as wild Beasts, nor do they differ much from them; for they fly upon every Body they meet, and wound them, as did those two in Sacred Scripture (*Muth. 8. 28, 29.*) not so much as sparing their Parents. Sometimes again they become mild, but are still intractable, talkative, singing, jumping, strangely tossing their Bodies, and always look furly, and haughtily, fearlessly, and impudently. But the common Symptoms, which attend all mad Men, are, constant Watching, and a Prodigious *Herculean* Strength, which whoever tries it will be to his cost. They can endure also the greatest Cold, Hunger, and Stripes without any sensible Harm. They swear, shout, and are always playing apish Tricks, often pulling off their own Hair, tearing their Cloths, breaking their Windows and Coffers. They are strong and never tired out, and are always muttering something to themselves of

great Things, as *Com* Fire, &c. Sometimes they are merry, sometimes sad, sometimes full where no Fear is. But of a suddain, hasty, and boist'rous, they break their and Fetters, and beat to Walls and Doors; for they neither sleep Day nor Night they are incredibly strong Reason of the fiery strength Animal Spirits, which darts all the Pores. Hence also they can endure the severest without the least Concern stark naked, as *Helmont* has said in his Tract called *Demon* in these words; "It is peculiar to a mad Man, that although stark naked all Night, he is not bare Ground or Stones, is not frozen, nor are his mortified with the sharpest Winds. A mad Man is insensible of any Cold; because, I think, the Soul is so busied that it does not attend to the of less concern without any Regard to Cold, where he does not value the Earth's nervous little Fibres, so they scarce perceive Hunger, and other Inconveniences. Sometimes they are so much incensed that they bite, or strike, or other Way abuse their Friends they stand by them, and behave as wild Beasts. They look stern, big, and attentive, are always contriving some chief, because the Animal pass furiously through the And sometimes they are so as to reproach and curse selves, and then they must be ter'd. Sometimes they have Pain in their Head, and are moderately, by Reason of

Animal Spirits irradiating the whole Brain. Fear, Love, Ambition, Cares, Study, &c. are, for the most part, Fore-runners of Madness, according to *Helmont*, who says, Madness proceeds from Fear, Grief, Wrath, Envy, Ambition, Love, Study, Care, Shame, and other such like things. Sometimes they are prone to Venery, and are solicitous about Business that does not concern them. But we need not spend any more Time upon these Things, seeing that we have already a thousand Examples before us.

§. 5. Cause.

The Cause of Madness, according to the Ancients, that is, the Physicians, is, ill Humors, as adust Melancholy, yellow and burning Cholera, and adust Blood, chang'd into the Nature of Melancholy. His Distemper, say they, sometimes comes from the hot Intemperature of the Brain; but if hot yellow Cholera be the Cause, that is then a wild kind of *Delirium* follows; so, that the Patients become rapt, desperate, and so strong that they need no formidable. But if this Distemper proceed from superfluity of bile, not adust Blood, chang'd into air, Frith the sorts of Cholera, flying and violently into the Head, then they that serve that the distemper'd Person expresses his Madness most by laughing and Singing.

§. 6.

Paracelsus, c. 2. de *Morbis Amensium*, says, Madness proceeds from the three first Principles. And, l. 10. §. de cap. advers. in c. 3. he asserts, That Madness,

Phrenzy, and all the Species of Madness come from the Obstruction of the Part, by Heat or Cold dissolved or coagulated. And, l. 1. de virib. *Membrorum*, c. 3. he says, Where the Spirit of Life cannot reach, there a Disease is bred; to wit, if it is stop'd, there arises Putrefaction, and Exulceration; for it dies in that Place. Also, c. 2. de *Morbis*, he makes two sorts of Madness; one which comes from Distillation, when the vapor lies in the Head; the other from Sublimation, when it is coagulated in the Head. And he tells us in the same Place, that it cannot well be understood, what is the first Occasion and Mine of this Distemper; but he guesses the Cause (in what ever Part of the Body it lie) to be the Mercury reverberated into *Calx*, and resolved into a most strong Water, which is mixt with the Spirit of Life, and enflames it. And he says, That that Water is so subtil, that it will not stay in the Bottom, but flies up as high as it can get; and as soon as it reaches the Brain, that it causes Madness, as *Petrus*, a Follower of *Paracelsus*, tells us in his *Nosologia Harmonica Dogmatica & Hermetica*.

§. 7.

The Famous *Helmont* thinks all Madness arises from the blooming of conceptual strange Ideas, which do show themselves, just as the Mark of a Cherry or other Mole from the Mothers longing, grows green or red at the Season of the Fruits; and so these mad Ideas, that come from Perturbations, (as he expresses it) have in the Spirit of the *Præcordia*, their incentive Intervals of Returns and Periods; and

and that in Hypochondriacal Mad-
nesses, there is a certain Poison,
which causes either a furious or a
merry Distraction.

If we may be allowed the same
Liberty with *Helmont*, why may
not we feign a rustick Madness, that
in its drunken Firs makes all this
bustle, and causes a Disturbance in
the Spirits?

§. 8.

WE will now examine *Will-*
is's Opinion, who treat-
ing of the Cause of this Disease,
says, that it is occasion'd by the
Animal Spirits that degenerate
from their mild and benign Na-
ture, that is, from their saline Spi-
rit, and turn sharp, as if they did
participate of fluid salt and Arse-
nical Sulphur; which vitious Spi-
rits are bred of deprav'd, and nitro-
sulphureous Blood. He also thinks
that poisonous Ferments got into
the Blood or the nervous Juice,
may easily breed this Distemper,
whch he proves by the biting of a
mad Dog, or drinking of Poison.
He gives this Reason for Madmen's
daring Boldness; That their Ani-
mal Spirits are very fierce, and car-
ry the Soul, as it were, out of the
Limits of the Body. Their im-
mense Strength he explains thus;
That in their Blood and nervous
Juice, there are nitro-sulphureous
or other very sharp, or Strygian-
like Particles; whence it is that the
Animal Spirits are endued with an
Elastick or Explosive Force, and
far exceeding the natural. Their
enduring Cold, Heat, Stripes,
Watching, Fasting, &c. with-
out any sensible Hurt, is, in
this Author's Opinion, because of
the Strength and Fixedness of

their Spirits, and their unap-
fly away.

§. 9.

THE *Sylvians* in this Ca-
cuse the Exandescence
Animal Spirits, caused for the
Part by a vitious Effervescence
they ascribe all the Symptom
mad Men to a remote Cause,
the *Succus Pancreaticus* stags
and corrupted. Which *Sy-*
their Master, discourses more
ly of in his *Praxis*, *Ca-*
Mania.

§. 10.

CARTES and his Tribe
that this wonderful Part
the Soul consists in the
Motion of the hot Animal Spi-
rits. For, according to them, the
is so long quiet, as the Motion
the Body are gentle and with-
Tumult; and this, say they, by
sists in a gentle Fermentatio-
the Blood. For so long a
continues, the Spirits in the
are equally poiz'd, but as
a violent Motion, by some
neous latent Ferment is bro-
upon the Blood so dispos'd,
is in melancholy Persons, the
mal Spirits are carried with
violence into the Brain, that
do not obey the Soul; for
gentle and mild Motion of
temper'd Spirits, usually
sedate, pleasant, wise, and
Thoughts: So on the other
hot and pricking Spirits too
mently moved, usually
man fierce, angry, bold,
dent, &c. Thus do they
the Animal Spirits of mad
be dispos'd. The gross

mentable Blood, and which is violently moved by some occasional Cause, as Anger, Terror, &c. is reckon'd by them the remote Cause (for the *Cartesians* suppose in the Blood of mad Men, a most strong Ferment.) But a certain Ferment, consisting of irregular Particles, proceeding from some external Cause raising Passions in the Soul, is often carried violently towards the Brain, and opens the Pores of the little Arteries of the *Plexus Choroidæus* wider than usual. And then the Motion of the pleasant Animal Spirits, is taken away by the Afflux of these heterogeneous Particles, which Spirits being kindled they suppose to rove up and down the whole Brain, but more particularly about the *Glandula Pinealis*, which darting violently like a Thunderbolt into the Brain and Muscles, do perfectly withdraw the *Glandula* from the Jurisdiction of the Mind, which being thus fool'd they, by those head-strong Spirits, and denied all Command over the Body, can no longer govern the Attention; and from thence they derive all those disorderly Gestures, Quarrels, Brawlings, &c.

§. II.

NOW let us give Our own Opinion; We confess that *Cartes* in his Discourse of the Passions, has very well explained the Phenomena of this Distemper, to wit, how Anger is caused, as, when a Man is evil spoken of: for when the Mind is intent upon that Impression, the Spirits, by the Motion of the Common Sensory, occasion'd by a certain agitation, are forced through the Tubes of the Nerves, into all those Members of

the Body that serve for Revenge. In like manner the Motions of the Blood and Humors circulating, whilst that they are moved by a strange Ferment, become swifter. But we will explain it as follows.

To which purpose we will measure out our Way betwixt the Qualities of *Hippocrates*, and *Democritus* his Salts, which act variously according to the diversity of their Figures. In this Distemper the Animal Spirits are enflamed, which being thus set on fire, like *Sampson's* Foxes, run through every little furrow of the Brain, and form all sorts of *Idea's*, especially those which were before conceived of Boldness, Madnefs, Burnings, Brawlings, &c. they also rush furiously into all the Parts of the Body, which they very much irradiate; and this is the reason why Madmen are so extraordinary strong, and can endure the sharpest Cold, and other Inconveniences. Amongst remote Causes we reckon the Blood, consisting of many fix'd and irregular Particles, because it administers Fuel to the enflamed Spirits; which if it acquire any acid volatil Ferment, it sets fire to the Animal Spirits. The Spirits in the Brain should be equally balanc'd; but as soon as they are put into any violent Motion, either by such Blood, or some wild bilious Sulphureous Ferment lurking in the Blood, then the Animal Spirits are set on fire. Poison and several other Things may bring this Distemper: Thus the German *Ephemerides An. 3.* tell us of a Country Fellow, who taking a nap under a Tree, when he awaked was raving mad, and so continued for the space of half a year,

but

but a vehement sneezing being raised by taking an Ounce of Tabaco, there came out a long hairy black Palmer Worm, after the voiding of which, he was perfectly well again. And the same *Ephemerides* take notice, that Madness has succeeded the Cure of malignant Small Pox. Likewise the Experienc'd *Ettmullerus*, the famous Professor of *Lipsick*, gives a notable Relation in *Disp. de morfu Viperae*, That at *Torgavia*, a neighbouring Town, a Mad-woman (who, as 'twas imagin'd, became so by a Love-Potion) by biting the Officer near the Arm-Pits, who was going to secure her, gave him the same Distemper, in so much that the next day he was as mad as the Woman had been, but she grew better upon it. And I my self have known the Bite of one in Wrath, to have caused a Madness and an incurable Wound. For Cholera, when it is predominant (as we observed before) is often the Cause of this Distemper, provided as *Democritus* says to *Hippocrates*, that it move swiftly and Anger make it communicate its sharpness to the Animal Spirits: For it is observable, that angry Persons seldom abide in one place, are very hot, and in a great Chase, and if they bite with their Teeth, they leave Poison in the Part, as the above-named History testifies. In like manner this Madness may come from Fear, or a Desire of Revenge; as *Orestes* (in *Euripides*) after he had kill'd his Mother, was distracted, till he made Satisfaction for the Crime at *Diana's* Altar. And *Empedocles* being mad with Pride, leaped into flaming *Aetna*, according to that of *Horace*;

— *Deus immortalis habet*
Dum cupit Empedocles, ardentem
gidus Aetnam
Insiliit. —

All the *Phænomena* of this Disorder, may easily be explain'd by what has been already said.

§. 12. Prognostick.

YOUNG and middle aged Persons are most obnoxious to this Distemper, nor are old Men together free. We knew a Company of such Old Mad-men, of sixty years of age, but of so very dry and gross Constitutions and Texture, that it might easily be perceived that their Animal Spirits, by being so hot as fire, inflamed them, were as hot as fire, and that Madness, as *Hippocrates* says in *Seß. 6. Aph. 53.* is less dangerous, when it is accompanied with Laquidity than with Seriousness; and the greater the Rashness is that is attended with it, the more dangerous it is. When the Distemper has taken a deep Root, it is hard to be cured. For the Impressions, which were formerly made in the Brain, afterwards ras'd out, and were burnt up, cannot be recovered again; because it is not possible to get out those Wounds which are once firmly impressed; as when any Impression is made with a Needle upon Paper or Leather, in Time, and by rubbing the Paper, the Impression is quite obliterated; but if the Needle go very deep, and make the Impression can never be removed.

A bad Stomach, and Ulcers in the Face, Anus, and Feet, are Signs. But if Sleep mitigate

Delirium, it signifies Good, as *Hippocrates* testifies, *Sect. 2. Aph. 2.* Likewise if mad People have the *Varices* and *Hemorrhoids*, the *Dis-temper* is cured, *Sect. 6. Aph. 21.* Watchings of long Continuance are dangerous. This Disease easily turns to Melancholy and Folly, for a Time, till new incentive Ferments enflame the Animal Spirits; and this happens two Ways, either from the Soul, or from the Body. The Soul makes the most tiresome and Ingrateful Things easie to it in Continuance of Time, and contemplates them with less Concern. From the Body thus: One sort of Madness is caus'd by a certain Ferment, which at last is spent; yet cannot be so consum'd but some Reliques must be left in the Solid Parts, which by some external Cause may be set fire to again, and so the Madness returns. If it be inveterate or hereditary, or caus'd by the Bite of a mad Dog or other mad Creature, it is seldom, for the Cause above-said, perfectly cur'd; for the old Impressions of the Brain being once worn out, and the Spirits enflam'd, and degenerating from their genuine Temper, are seldom reduc'd to their former State; Of which we have treated more largely above, especially where we gave the Causes of this miserable Disorder.

§. 13. Dietetic Cure.

The Dietetic Cure consists in the due Observation of the Six Non-Naturals. Let the Air be temperate, rather inclining to Cold and Moistness; but carefully avoid an Air too hot and impure: And decline going abroad in the Spring; for the great *Hippocrates*, *Sect. 3.*

Aph. 20. says, Madness, Fury, and melancholy Diseases have their Birth in the Spring, when Beans are in Flower, according to the Verse,

Cum faba florescit Stultorum insania crescit.

It may happen at any other Time, but especially in the Dog-Days, and some I have seen go mad in Winter. For as the Sea, through the violence of Tempests, swells up from the Bottom, and raises its proud Billows; so likewise when the Winds are very boisterous, the Humors boil in the Body with a kind of Tide; which being carried into the Brain, and disturbing the Animal Spirits, raise confused Motions in the Soul, and cause Disquiet and Distraction. And this is the Reason that in tempestuous Weather there are so many Storms in the Passions, such a Difficulty in Speaking, such Anger in the Mind, such Moroseness in Conversation, &c.

Let their Meat be cooling and moistening, as Broth of Chickens, Partridges, Hens and Pullets that are stuff'd with cooling moistening Herbs, and such other Things. Some write (how well I know not) that Hogs Brains fry'd in Butter and eaten, are very good in this Case. Windy and hot Meats are very bad, because they may kindle the Animal Spirits, as Aromatics, sharp Things, Mustard, &c. Swines-Flesh, Meats hang'd, and dry'd in the Smoak, as also all leaven'd Things are found to be very hurtful.

Let their Drink be cooling, as Barly-Water, or Spaw-Waters, Decoction of the Herb Pimpernel. A Decoction of Swallows, with *Lapis Prunella* I have found good by Experience

perience; but let them abstain from all Sorts of Wine, for according to the Poet,

Vina gravant animos, faciuntq; furoribus aptos.

Wherefore rich Wines, Spirit of Wine, and other hot Cordial Waters, are by all means to be avoided: So that the Ancient Rite of the Heathens in drinking three Healths to the Honor of their Gods, is worth Observation. The first Bowl was to *Jupiter Olympius*; the second to the Hero's; the third to *Jupiter Sospitator*. Which were also of old called the Healths of the Sages. The first to their Healths; the second to their Friends; the third to their Rest. What was more than this they reckon'd Madness, and an Injury to their Healths. So we Physicians usually attribute the first Glas to quenching of the Thirst; the second to Pleasure; the third to Drunkenness; and the fourth to Madness. For as a loaded Ship in a great Storm, when the Pilot is asleep, or has lost its Rudder, cannot steer right; so he that has his Senses overwhelmed with Wine, and his Mind oppress'd, runs against the Rocks of Folly; which *Pythagoras* observing, said, That Drunkenness was the Exercise of Madness. Again he says, *apud Stob. Serm.* That drunken Men, as well as old Men, become twice Children. *Chrysostom* called Drunkenness, a running out of ones Wits. Yea, it must needs be, that *Violentia* turns into *Violentia*.

Let their Exercise be moderate; therefore Running, Leaping, &c. must be avoided.

More than ordinary Sleep is very convenient in this Case, which

must be provoked by inward outward refrigerating and Medicaments. For (according to *Hippocrates*) so long as the Patient is quiet, so long a Man is free from Wits. Long Watchings are full.

As to Excretion and Retention The Belly is to be kept loose if the Hemorrhoids and Constipation stop; they must by all means be forced; and likewise of Stomach and Ulcers, if they be stopp'd, must be made to flow again.

The Mind must be kept free from all Passions. Let Friends be admitted, but Strangers, especially as the sick Person either loves or does hate, be kept from him according to Us and *Helmholtz*. Love, Agony, Envy, Ambition, Torment, Love, Study, Care, Shame, and Confusion, and other such perturbations must be avoided which serve to enflame the Mind and enrage the Animal Spirit.

§. 14. Pharmaceutic

WE now come to the Pharmaceutic Cure. The ancient Practitioners, especially *Galenists*, in the Beginning of a Distemper, use Preparatives, such as Syrup of Violets, Sugar of Sorrel, Bugloss, Succory with barbs, &c. Water of Violets, Water-Lily, Succory, Endive, &c. After these they proceed to Evacuators. And first they order letting, if the Madness comes from a superfluity of very hot Blood, which they call it; which they do without a Plenitude. And then these following Purgers; *Roses, Confectio Hamech, Diac. Hiera Picra, Pilula Inda,*

inward of Armeno, &c. Syrup of Violets; and Leaves of Succory, Fumitory; Flow-accorers of Water-Lily, the greater cold the heads, Liquorice, which may be an is given ſometimes with, ſometimes ngs without Purgers, divers Apozems and Drinks or Decoctions. After-nd Reward alſo for evacuating they make ot looſe of Manna, Caſſia, Senna, black d Conſellebor, &c. Nor do they con- all men Clyſters of the Leaves of e of Violets, Lettuce, Maſh-Mallows, ſe ſtop Malloes, Oil of Violets, of Wa-again the Lily, &c. After this theſe be kept ſtationers fly to Averters and et Frickellers, applying Leeches to the ers, one Part of the Head, and to any ether other Part of it outwardly. The om him Hemorrhoids and Courſes are to be Helmon, provoked.

ition, To this End they embrocate the Shame, head with Oil of Roſes, Juice of ſuch ſhort-Graſs and Vinegar, &c. or avoid apply in a Rag to the fore-Part of me the Head, and often change them, al Spirituſm made of theſe Things; id order the Head to be fo- ented with a Decoction of the lowers of Stæchas, Chamo- e to the il, &c.

re. To ſtrengthen the Brain and eſpecially its Intemperature they com- ginning end Species Diamargaritæ frigid. leſſuarium de Gemmis, Dia- on Santalæon. Conſerve of Bu- oſs, Water-Lily, Borrage, Violets, d ſuch other. To the Liver they apply Epithems of the Water of adive, Roſes, Sorrel, Camphore, ſikenard, &c. To the Heart Wa- of Bugloſs, Roſes, Water-Lily, negar, Species Diamargaritæ fri- . They highly extol a Bath Water, wherein has been boiled lowers of Chamomil, Melilot; aves of Violets, Lettuce, Wil- rgers; w. Alſo they adviſe to anoint e Back-bone with Oil of Water-

Lilies, Sweet Almonds, Roſes, Violets, &c. When the Caſe is almoſt deſperate they boldly ap- ply Cauteries to the Nape of the Neck.

§. 15.

Paracellus thinks he has found better Remedies than thoſe of the Galeniſts. And ſays *I. de Morb. Ament. c. 2.* that in the Cure of this Diſtemper we muſt have reſpect to two Things, to refrigerate and coagulate the peccant Matter. Amongſt refrigerating and cooling Things, he reckons Narcoticks and Anodynes, the moſt excellent of which are his *Laudanum opiatum*, the Quinteſſence of Mandrake, Poppy, Henbane. But he thinks that theſe following are ſpecifically good, the Quinteſſence or Spirit of Saturn, Mars and Mercury, the Solution of Cryſtal, Extract of Camphore, Gold, and the true *Aurum Potabile*, the Liquors of Luna, Sapphire and Muſk, as he has it, *lib. 2. de Virib. Membr. c. 4.* and there he very much cries up the hidden Virtues of *Gilla*, which he would have diſtilled in the Wine of Life, and to circulate till it cannot touch the Bottom, and to be given in Malmſey: This many of the *Paracelliſts* ſay, is Nitre diſtil'd with the alcaliſted and rectified Spirit of Wine, which they will have to be afterwards circulated until it become altogether ſpiritual and volatil. Some of them think it to be a Preparation of Vitriol, which *Paracellus* in another Place, where he makes it a ſpecifick Cephalick, calls *Gilla* or *Grilla*.

§. 16.

Helmont treading in *Paracelsus's* Foot-steps, commends both Narcoticks and Anodynes in this Distemper, and mightily extols the Philosophic Sulphur of Vitriol, calling it Narcotic, soporiferous and sweeter than Honey; therefore he says, it is sovereign in all Alienations of Mind, and Phancies and Passions of the *Hypochondria*; for all Kinds of Narcoticks, according to him, keep the Spleen from sending such dismal *Chimera's* to the Brain. He declares black Hel-lebor to be very useful, because it alleviates the Uneasiness which numerous and troublesom Phantasms give the Patient. Amongst other Things he commends dipping over head in cold Water, by which he has seen many cur'd.

§. 17.

Wallis says, nothing is more necessary in this Case, than to keep the distracted Person in awe, and commends Severity of Discipline, as Threatnings, Bands, Stripes, and other such like Courses; for that Mad men may be better cur'd by beating and tormenting them in a close Room, than by Medicaments. He also advises Bleeding, Vomiting, and now and then strong Catharticks. He would have a Vein to be opened, sometimes in the Arm, sometimes in the Neck, sometimes in the Fore-head, sometimes in the Foot, and this to be repeated often; for by that means he thinks that the Loftiness of the Mind is best suppress'd, and that always other calmer Blood is bred of the Chyle, and its Dyscr-

cy amended. His Emetic Distemper are these:

Take of Sulphur of Antimony eight to ten Grains, Tartar half a Scruple. Or, Take of *Mercurius* Grains, Conserve of Red Drachm. Mix them. Of Emetick Tartar from three Grains, Salt of Worm two Grains. Mix them.

He wonderfully cures up *Vita*, as also Mercurial Ne- forasmuch as they are wont by Vomit and Stool; also by Urin and Salivation. For the author has seen some Mad men perfectly cured by Salivation. Purgatives he commends which follows.

Take Extract of black *Calomelanos*, or, *Mercurius* of each one Scruple a *Bolus*, &c.

He also highly esteems *Alia* in this Distemper. *Ex. g.*

Take of Mineral Crystals, Ounces, prepar'd Pearls a half, Sugar-Cane, Ounces and a half, half a Scruple. Beat all together and make a Powder. Of which let a Person often take from two Drachms, in small Spring-Water, and let him so often as he pleases, ordinary Drink, especially of Goats Milk, also the Flowers of Violets, Water-Lilies.

also commends the often taking of cooling Electuaries, Juleps, distill'd Waters. For a Specimen in this Distemper, he mightily recommends the Decoction of Purple-wort Pimpernel, also the Tops of St. Johns-wort.

If the Madness come from the use of venomous or mad Beasts, he commends Infusion of Apples, several Kinds of Tinctures and Pills.

In every Sort of Madness he advises Cupping with Scarification, also Vesicatories and Cauteries, both actual and potential. He does not easily admit of Arteriotomy, Bleeding and Mercurial Unguents, without Distinction of Persons and Cases.

He applies Lambs-Lungs reeking with Saffron, and other hot comfortable Ointments, to the fore-part of the Head when the Hair is shav'd off, and the Patient never so unwilling to permit it. Whoever would be persuaded further, may consult the Author himself.

§. 18.

Alexander Tricassius, as well as the rest, commends Venesections, Vomitorys, aqueous Alteratives, as Emulsions, Juleps, Whey, Mineral Waters, and such like Things: neither does he discommend *Lapis Prunella*. He mightily extols Vesicatories, and other external refrigeratives, as also Anodynes taken inwardly, and applied externally, as *Laudanum Opium*, *Opium*, &c. He affirms that Cooling Clysters are of great Use. I am unwilling to spend Time being more accurate.

§. 19.

Carter and his Followers say, That to diminish and stop the Motion of the Blood, Venesection, and that to a good Quantity, if the Patient be strong enough, is very convenient. As also all ponderous things which by their Gravity stop the Blood in its swift Career. To this end they usually prescribe *Lapis Prunella*, *Saccharum Saturni*, *Lapides Cancrorum*, *Laudanum Opium*, *Sanguis Draconis*, &c. And they also commend the Decoctions of the Common Woods, in that by their hard and heavy Particles, they stop the Motion of the Blood, and by the stiffness of those Particles cut it, and take away the Obstructions, especially if some of the Pores of the Common Sensory be obstructed by gross Particles. They exclude all Chirurgical Operations whatever.

§. 20.

WE are now to deliver our own Opinion, which is, That the Animal Spirits being, as it were, all on fire, and darting themselves too furiously, and flashingly, must be extinguished, and brought to a gentle and regular Motion. This, Bleeding, often repeated; will effect, but it must be by a small Quantity at a Time, lest it cause a Dropsy, an Example of which I my self have known. Opiates are very proper in this Case, which presently compose the raging and boisterous Animal Spirits; but they must not be given immediately, nor in a large Dose; for it may fall out that the Spirits may be so exhausted by the

long continued Madness, that if Narcoticks should be given. they would so enfeeble the Fermentations of the Blood, that Death would follow upon it. But we must first begin with Anodynes, as likewise with a very small Dose of Camphore instead of *Opium*, to stop the Motion of the Blood; for Camphore is so subtle that no Danger can arise from thence. If the Disease begin to respite, we commend the Use of Vomitories, to take away the remote Cause; to wit, to free the Blood from many fixt Particles, and to cast out other extraneous Ferments residing in the first Passages. For by the Use of these, the Blood is discharged of those excrementitious Parts. These Vomitories are chiefly Preparations of Antimony, as *Tartarus Emeticus*, *Aqua benedicta Rulandi*, Vomitory Sapa's, and other Things of this Nature. To those of a more nice Palate, white Vitriol may be given. Others cry up black Hellebore and its Extract. It is our Opinion that strong Purges ought, according to Rule, to be omitted, for that they do but more encrease the inordinate Motion of the Animal Spirits, and drive them deeper into the Pores of the Brain: For in such a furious Perturbation there is an impetuous Ebullition and Effervescency of the Blood, which also arises from the Force and Irradiation of the Animal Spirits, and from thence often proceeds too great a Rarefaction and Ebullition of the Blood. Poly-pody of the Oak many times does the Business in this Case. But, to bring the Blood to its due Fermentation all Chalybeat Medicines are convenient, for they stop the Motion of the raging Spirits, and the violent Fermentation of the Blood.

The Blood of the *Stag* drawn from the Veins of the Ears, has a singular and singular Virtue in destroying the Acid. Of which *Michael*, famous Physician has given the following Prescript.

Take a linen Cloth, and sufficient time in Asses out behind the Ears; a convenient Quantity of Pimpernel, and St. Johns-wort, until be tinged. Mix them a Portion for several Days this Medicament, the *Michael* avows that he that was Mad in the *Coltenburgh*.

We are of Opinion that of a Dog, Hair, yea also of a Man, are available in stemper; because there are Creatures a Terror, Fear, &c. when a Vein is breathed. Blood has a peculiar Nature from thence it is that the *Marcus Marci* very well it is of no small Concern Disposition those Animals Parts are made use of in

In this Case the Treatment of Calfs, Asses and Mans Blood being always first is convenient; for by it is known many Mad-men *Paris*, and I my self, as first try'd it with good Success on one that was distracted with divers Medicaments, Opiates, into the Mefers will not be unprofitable. Alteratives the Anti-Epileptic of *Hartman*, prepared of Salt of Urin, and of Vitriol is very good

Ordinary Drink, viz. in a Decoction of Pimpernel and Flowers of St. Johns-wort with two Swallow-tails. You may put some Drops of Vitriol, or *Lapis Prunella* they have of Goats-Milk, which have an peculiar Virtue of bridling and taming the Animal Spirits. And, short, we expect the only, at the certainest Help in this Disorder, from Opiates, provided they be strong; for they wonderfully lay asleep the Animal Spirits, and are violently moved, and constrain their dangerous Motion. For the Sick Persons are in Danger by the fierceness of the Spirits, which forsaking the Office of the Vital Faculty, put things in Confusion; or as Phœnix flung from his Father's Lot, stir'd the Macrocosm, so do the Microcosm. For *Opium* calm these Furies, assuage these Motions, and doth wonderfully the Motion of the Spirits. It proceeds pleasant Rest, and a sweet Settlement of the disordered Spirits, and also the Turbidity of the peccant Matter and Motion of the Humors hereby calmed; for if the Spirits be calm, which is best done by a due Use of Opiates, the Republick of the Macrocosm, that was before in Motion, does in a manner return to its settled State. If amongst Opiates you desire the more simple sort, *Opium* (for *Opium* is scarce with us) may be digested and corrected with some fixt *Alkali* Salt, especially *Sal Tartar*, with Turpentine, or by artificial Fermentation with *Quinces*, according to *Hoffmann* in his *Clavis Pharm. Schræd.* *Opium* so corrected becomes strong without being Narcotic, and Grains of it do more Good

and less Harm, than thirty of any other. Of this *Laudanum Opiatum*, *Helmont* speaks very elegantly *Tr. Jus Duumviratus*, §. 64. Happy is that Patient whose Physician knows how to separate from Poppy that which is deadly, and retain that which is useful. Amongst Minerals, Sulphur of Vitriol, and Anodynes of Copper are very effectual; but seeing that these Medicaments are not so easily attained, we ought in the mean time to be content with Opiates. Nor do these following want their just Praise, *Theriaca celestis Hanov.* the Anodyne Tincture of *Zwelfer*, *Diacodium*, *Theriaca Andromachi*, and others which we purposely omit; for we cannot be particular in every thing, designing only to give a general Scheme. Nothing will more fix and settle the raging Animal Spirits than Oil of Pearls rightly prepared, the Efficacy of which we have often Experienced in this Distemper. This following Lunar Spirit is also very good.

Take of the Filings of Silver one Part, of Sulphur two Parts. After they are gently melted and united in a Crucible, and pulveriz'd, pour upon it Spirit of *Sal Armoniac*. Extract a Tincture according to Art, which crystallize, and with a Retort draw a Lunar Spirit. The Dose is from sixteen to twenty Drops.

If the Patient cannot sleep, the following Potion may be given about Bed-Time.

Take of *Laudanum Opiatum* two Grains. Dissolve it in a sufficient Quantity of Essence of Pimpernel and St. Johns-wort.
F 2 SWEETEN

Sweeten it a little , and give it at once.

They commend Musick in the Biting of a *Tarantula* , and in the Distemper arising from thence , which is like to this in every thing; and since others have done it, I think we may make Tryal of it. Amongst the most ready Specifics is the Blood of an Ass drawn from behind the Ears, destill'd with the Flowers of St. Johns-wort, Juice of Pimpernel, Roots and Seeds of wild Fennel; and these are also good if infus'd in their ordinary Drink. Agrimony boil'd in Spring Water is excellent. I have often known good Success from this which follows.

Take of *confectio Alkermes* one Ounce, Tincture of *Lapis Lazuli* half a Drachm , of Amber two Scruples, Essence of St. Johns-wort, Pimpernel of each half a Drachm, Magistery of *Luna* half a Drachm. Mix them. The Dose is one Ounce Morning and Evening. Or, Take of Water of St. Johns-wort, Pimpernel of each three Ounces, *Confectio Alkermes* a Drachm and a half , *Lapis Lazuli* prepar'd two Scruples, Syrup of St. Johns-wort one Drachm. Mix them. The Dose is two or three Spoonfuls. Or , you may often give the Tincture of *Lapis Lazuli*, or the Essence of Pimpernel or St. Johns-wort. Also *Mynsicht's* Compound Tincture of St. Johns-wort. Or, Take of *Nitrum Antimoniatum* one Scruple, *Butyrum Perlarum* half a Scruple, Magistery of Amber three Grains , of *Luna* five Grains. Mix them, and make a Powder for one Dose. Or, Take of the

Spirit of Vitriol sulph a Drachm, Syrup of Drachms, Water of wort one Ounce. Make two Doses.

Weathers Brains fry'd namon, Nutmeg, Cloves for three Mornings , is a great Secret by a famous Author.

The Secundine of a her first Child Pulveriz'd Drachm of it given in Wine, is sometimes a Friend told me for a great that he had cured many with the Juice of young given to the Quantity of twice or thrice in the Pimpernel.

Amongst external we commend divers Unguents prepared of cooling Opiates, and apply'd to the Head shav'd, and Temples of our Country-men destill'd in *Balneo Marie* with Camphire Whites of Eggs, and bathed therewith.

A live black Hen (or Swallows) cut in two in the back and laid reeking hot to the Head when shaven has been successful.

We are not against these Things by the by, Ligatures , Scarifications, Cauteries, both Actual, with Indian *Moxa*, or of *Moxa* found out by us; as tential, but they must be with Caution.

Whoever goes about more exact *Epitome* from the following Medicaments, needs lose his Labour.

CHAP. V.

Of a Lethargy and Carus.§. I. *Definition.*

Lethargus or *Lethargia*, the *Lethargy* (by some call'd *Veterinus*, by some *Torpor*, by some *gravis* or a heavy Sleep, by *Coma*, by some *Cataphora*, by many *Subeth*) is commonly : A Cessation of the principal faculties, but especially of the *Faculty*, with an unavoidable Necessity of Sleeping, (as *Celsus* expresseth it) and arising from a watry humour, with a continu'd lingring *Humour*. A *Lethargy* and *Carus* are *Kind*, and are almost cur'd the same way, and therefore we thought fit to treat of them both together. *Section* Definition is this ; An insensible Necessity of Sleeping, a perfect Oblivion, sometimes a Fever and *Delirium*, sometimes without them, and arising from the Animal Spirits sticking in gross viscid Matter, and forsaking their Offices.

§. 2. *Difference.*

Carus differs from a *Lethargy* thus ; A *Lethargy* is attended with a Fever, and the *Lethargick* keeps his Eyes at loud bawling, makes some impertinent Answer when spoke to : But those

who share in a *Carus* have no Fever, never open their Eyes, speak, or stir, but lie as if they were dead, only draw their Breath. A *Carus* is not unlike an *Apoplexy*, yet it differs from it in *Respiration* : for in a *Carus* there is a free *Respiration*, but in an *Apoplexy* scarce any. In a *Carus* they neither are sensible, nor stir, nor understand, nor think, nor desire, and only differ from dead men, in that they draw their Breath.

§. 3. *Part affected.*

THE *Part affected* according to the Ancients, is the Substance of the Brain, and most of all, its hinder-Part, but not its Ventracles : Which they endeavour to prove from the Functions of the Brain being hurt ; because in this Disease chiefly the Memory and the Reason suffer, which are the particular Offices of the *cerebellum*. Some of the Ancients take the Heart, though without Reason, for the Part affected.

Willis in his *Anima Brutorum*, reckons for the immediate Subject of Sleep and Waking, the greater part of the Sensitive Soul radicated in the Brain, which, according to him, is nothing else but the Animal

Faculty and Spirits, and he confidently asserts, That the Soul (like as in Sleep,) does as it were furl its Sails, and hide its Head in its own Bosom.

Sylvius does not take the Brain in this Distemper to be the Part affected, but the Vessels that carry the Blood. For says he, *Prax. l. 2. c. 29. §. 19.* Tho the Head of the Lethargy be heavy, yet that may proceed from the Humors that are carried with the Blood to the Brain; so that we need not have Recourse to a peculiar & primary Fault of that Part.

The **Cartesians** blame the Pores of the Brain, which if obstructed, the Animal Spirits cannot pass through them to execute their Offices; from whence, say they, proceed such an Inclination to Sleep.

Helmont, lib. Jus Duumviratus, thinks this Distemper to be originally from the Stomach and Spleen.

We take the Brain and *Cerebellum*, and their Pores or Passages through which the Animal Spirits move to the Execution of their Duties, either in the Brain it self, or the other outward Senses, to be the primary Subject. But as to the Specific and Individual Part, We think the Medullar Part of the Brain is primarily concern'd, because this Part is rather the Rendezvous of the Spirits, than the Part where they are bred; nor do we exclude the *Cortex* of the Brain, which commits most of the Spirits, when they are generated, to the Nerves. For if the *Cortex* be the Seat of the Memory, and of Sleep, as *Willis* says it is, it cannot but have a share in this Calamity.

§. 4. Diagnosis

There is in these Diseases a superable Inclination with a Forgetfulness of Things; yea sometimes a per'd Person cannot remember his own Name. Sometimes *Delirium*, sometimes a continual fever. When it is comascribes it to the Cholera, the whole Mass of Blood lingring, to the less action (seeing this is but *Flegma*) wherefore the Parts do so much. And this comas may be remitting, but not ting, because the Blood is ly tainted.

The Patient is forgetful of the Disease, because the Brain subsiding, disturbs that action of the Spirits which is for the Memory; and hinders from passing vigorously in their usual way, into the memory made in the Brain, being reflected to the *Pinealis*.

The Sick Persons make Replies, altho they be in it, and for the most part their Eyes clos'd, but now and then Lethargicks open them aloud upon them, which again, they forthwith return to their former Sleep, and to such a Degree, that they pull them by the Hair, hurt them, as being so that the Operations of the Senses are suspended. Sometimes so great an Oblivion or eclipse of the Memory, that Mad-men, they forget their names, yea, though some call them

Pot with a design to make Wa-
 yet they forget what they were
 out to do, of which I my self
 give two Instances; which
 makes it clear beyond all Dispute,
 that the Memory and Reason are
 in this Case quite abolished. They
 do not are took with this Disease,
 yawn, and have a lingring
 ever, with a slow trembling, and
 a fainting Pulse. The Reason
 by the Pulse is sometimes hard,
 sometimes soft, is, because the Skin
 and Flesh and Arteries under the
 in, are softer or harder, which
 exposes upon him that goes to feel
 the Pulse. Some have their Stools
 in, others again are bound and
 have their Stools hard. Their Urin
 commonly like to that of Cattle,
 which is always better than if it
 were clear. In some we have obser-
 ved a sweating, accompanied with a
 burning.
 Their Respiration is sometimes
 strong, sometimes weak, sometimes
 roughly, and sometimes attended with
 rattling. That *Delirium* which
 goes along with this
 Distemper, is not a true *Delirium*;
 for we all of us dote as much, and
 make as impertinent Replies when
 we are drowzy, because the Motion
 made upon the Nerves, by the
 words spoken, is scarce carried to
 the Brain, or if it be, it is but very
 weakly and corruptly; wherefore
 that in the Soul are started
 up, and thus'd Thoughts and Perceptions,
 that when she making answer to, speaks
 hardly: therefore it cannot be
 said that he that sleeps is delirious,
 for we have known so many
 persons in Health to answer imper-
 tinently when betwixt Sleeping and
 Waking. The Case is the same in
 this Disease, so that we need not
 describe the Cause to Putrefaction in

the Brain. There is a Drowziness
 and Heaviness throughout the
 whole Body, especially the Head,
 and though they be turn'd upon
 their Backs or Sides, yet they will
 turn again to their former Postures.
 In a *Carus*, altho the Patient be
 awaked, yet he neither is sensible,
 nor gives any Answer when spoken
 to, which is a thing proper to a
Carus; yea, if you prick him, al-
 tho he show some small sign of Sen-
 sation by Contraction of the Part,
 you cannot for all that rouse him
 up. For the most part also all the
 outward Senses become in the End
 stupified, whereupon neither do
 the inward Senses perform any of
 their Duties, and are just as if they
 were dead, excepting that Respi-
 ration remains unconcern'd. So
 that a *Carus* is a Kind of a middle
 Distemper betwixt an Apoplexy
 and the other sleepy Diseases,
 and the next Degree to an Apo-
 plexy.

§. 5. Cause.

THE Ancient Galenists, with
 their Followers at this day,
 reckon the immediate Cause of this
 Distemper to be from the cold and
 moist Intemperature of the Brain,
 that corrupts there; and from a
 pituitous Tumor or cold Apostem,
 arising from the putrifying of cold
 Phlegm, and by that means dis-
 turbing the Reason and Memory,
 and causing a masterless Drowzi-
 ness. From the Putrefaction of
 Phlegm they deduce the Fever; so
 that they say the Cause of these
 two Distempers, is, a thick and
 clammy Humor lying upon the Sub-
 stance of the Brain, by the abound-
 ing of which they solve all the
 Phenomena of this Distemper.

§. 6.

THe *Paracelsists* deny that it is caus'd by the Coldness and putrifying of this Phlegm, but say, That it is from the Spirits or Vapors of Sulphur, or a sort of Narcotic Salt, which by its viscoufness ties up the Spirits; or by its vitriolick acidity coagulates, or by its Narcotic Quality stupifies them, so that they cannot come at the Organs of the Senses to do their several Offices. Which is confirmed by this, That there must needs be found some fuliginous and stinking Sulphur, as in Poppy, *Opium*, deadly Night-shade, Henbane, Mandrake, and such like, which contain in them stinking Narcotic Oils, which easily take Fire, & so abound with a soporiferous Quality, which is the Property of inflammable Sulphur. Therefore though *Opium* and *Opiates* by the *Galenists* are accounted cold in the fourth Degree; yet if the Temperaments and Qualities of things are known by their Taste and Effect, our *Opium* is not only bitter, but also sharp and bites the Palate; from whence the *Paracelsists*, no doubt, conclude, That these above-mentioned contain a Sulphur in them, to which the Cause of this Distemper is wholly to be ascribed. According to the Chymists therefore these two Diseases, *Carus* and Lethargy, are caused by the Resolution of Narcotic Sulphur.

Paracelsus, *Lib. 2. de Vita longa Cap. 2.* makes a Lethargy a Species of *Gutta*, which *Gutta* he calls the Separation of the nutritious Juice from the Part, which is done by the Sublimation of the *Cachochymic Mercury*. In another Place he makes the Salt of

Vitriol to be the Cause of Distemper.

§. 7.

HElmont, and his Followers *Tachenius*, falling, by means I know not, into the *Paracelsian Road*, think that this has its rise from a vaporous phur.

§. 8.

Willis says, that this Distemper is generated from a corrupt Matter overspreading outward Part of the Brain; partly from some Narcotic Humors pre-existent in the Blood convey'd thither; and there adds, that by this means the circulation of the Blood is hindered or altered. He also thinks that *Serum*, and other all Humors sometimes sent in too great Quantity to the Brain, and that it receives them, by Reason of Pores being over-widened, by too much Coldness and Moisture of its outward Part; as he proves by the Example of Children, Old Men, such as are *Cachectic*, *Hydropic*, *Scorbutic*, &c.

§. 9.

Sylvius, as was said before, thinks the Cause to be a too great Quantity of gross Phlegm, and Narcotic Choler closely mixed with the whole Mass of Blood. Lingring Fever he derives from that naughty Bile vitiously fermenting with the Phlegm, where it meets in the *Duodenum*.

§. IO.

Cartes and his Followers, who assert natural Sleep to be the subsiding or closing of the Pores of the Brain, conclude that the immediate Cause of this Distemper is a preternatural Obstruction of those Pores by means of a gross Humor, and a Want of Spirits, which are drowned by an Inundation of filthy Matter, and thereby changed with the Figures of the Pores. And they also say, that viscid dewy Vapors, which easily turn to Water, and oppress both the Brain and Soul, do much contribute: when, on the contrary, sharp and dry Exhalations, because of the too great Agitation of their Particles, do not so readily turn to Water, as we see the most blustering Winds to dry the fastest, of which *Cartes* Discourses more at large *de Meteor. c. 3, p. 212.*

§. II.

W^{7C} as to our own Parts, suppose the Animal Spirits, surrounded with Clouds of Vapors, to stick in a viscid, and, for the most Part, acid Matter, so that they must needs desist from doing their Duties; especially if the Passages are stopt which they were wont to pervade; for from hence there will proceed a Cessation of the preternatural Undulation and Motion of the Animal Spirits into the Nerves, and their Irradiation into all the Members. But the more immediate Cause is to be sought for in the viscid Mass of Blood, and in the Spirits of the same Nature, viz. that are imbued with a certain extraneous Spirit,

or *Gm*, (as the Chymists call it.) For if any heterogeneous Thing whatever, in either of these, obstruct or overflow the Pores in the Cortex of the Brain; or also if any Narcotic Poison by its previous filth drives away the aforesaid Spirits, and altogether extinguishes them, then this Mischief is easily raised. The Motion and Circulation of the Humors are diminished in this Distemper, and in natural Sleep, because the Spirits not flowing so copiously into the Vessels, squeeze them not so much, nor consequently move and thrust forward so swiftly the Humors contained in them. Now these Humors by sticking there are thickened, and by long stagnating cause Obstructions, if they be not presently driven on by the Spirits. In the Evening we grow dull and drowsy for want of Animal Spirits, and upon this account many Diseases are worse towards Night, and from this greater or less Defect of Spirits, for the most part proceeds more or less sound Sleep. Therefore the Cause of this Distemper lies most commonly in the drowsy Disposition of the Animal Spirits, the Obstruction of the Pores of the Brain, and the viscidty of the Blood. For whilst this heterogeneous and clammy Mass of Blood forces its way into the Brain through the two *Carotides*, it leaves there a glutinous and slimy Matter, in which the Animal Spirits stick fast, and so the Pores of the Brain are obstructed.

Narcotic Medicines may easily produce this Disease, if they be given unseasonably, or in too great a Quantity, for they very much fix the Blood and Spirits. Narcoticks are to be manag'd prudently when the

the Patient has long wanted Sleep, because then the Fermentations are very weak in the Heart, and when the Narcotic Quality gets into the Blood, it so disposes it, that it is less and less fermented. Wherefore when Strength is already decayed, it is so far further diminished by the use of Opiates, that life cannot be supported: And hence 'it is that sometimes, after a small Dose of Opiates in long Watchings, Death ensues.

This Distemper sometimes also has its Original from a Narcotic Vapor arising from Coals or Turfs; for these Vapors have some Arsenic in them, wherefore if they cause anyone to faint, he must be exposed presently to the open Air, and hot Spirits put into his Mouth, such as *Aqua Theriacalis*, *aqua Vita*, *Antapoplectica*, &c.

Drunkenness and Gluttony, as we have said before, may easily bring this Distemper. Corruption is an unequal and bad Mixtion of the Parts of the Blood amongst themselves, whence comes a Fever: For every Fever is not an Accension of the Blood in the Heart, and an increased Fermentation, because in some Fevers the Pulse is the weakest.

Therefore when the Blood is thick, pituitous and badly mixt, it breeds gross and ill mixt Spirits, whose Parts consist of very irregular Particles; some of which are gross, others fine and pure. The purer sort, at first, pass into the Nerves, but afterwards being obstructed by those that are gross the subtler can no longer enter, and hereupon the Nerves flag. And because pituitous Humors do every where obstruct the Arteries and their Pores, therefore there are not

Spirits enough generated to put the Brain, and keep it in Motion. And hereupon all Motion and Sense is lost; for the Nerves now being swoln with Spirits, they become flaccid and subside; so that when they be twitched at their Ends they cannot transmit that Impulse to the Brain: And hence comes this Distemper. From what has been said, all the *Phænomena* of this Disease may very well be explained and unfolded.

§. 12. Prognostick.

NOW that we have done with the Causes, we will proceed to the *Prognostick*. Of which *Avicenna* thus speaks, "Seeing this is an Acute Distemper, it brings Death, if there be not present Help." The divine *Hippocrates*, 2 de *Morbis*, defines the Time in his own words; "Lethargicks die in 30 Days, but if they escape so long they will recover. This is also dangerous if it come upon a Fever, or other Cephalic Diseases, or a continual Cough. Also old Men are in more danger than young, for their Spirits are not so vigorous as young Men's, and also in those that are old the Pores of the Brain are more liable to Obstructions, which hinder the Spirits from enlightning the several Parts, and making them fit for their Duties. For the Spirits are the Governors of the Body, and if there be not a sufficient Quantity, it must needs be that the Patient mightily suffer. It is also a bad Sign if the Patient be overcome with a very great Drowsiness, if he breath slowly or rattle. There is more Hope if the Distemper proceed from Gluttony, than

kernels, Smoak of Tabaco, use of Narcoticks, a light stroak on the Head, or by too much wetting the Body. In like manner it is less dangerous if Evacuacions by Stool and Sweat, whether by Art or Nature, give ease; also if their Blisters run well, and if they sneeze often, and their Nose or Eyes drop with Water. If there be an Abscess behind the Ears it is lookt upon as a Degree to Health, and is commonly accounted a *Crisis*. A Suppuration often grows in the Breast when they begin to recover. A Trembling in this Distemper is one of the worst Signs, and also a cold Sweat about the Head and Forehead. If the Excrements by Stool be many and thin; it denotes a greater Defect of Animal Spirits, and consequently Danger. The Female Sex is most obnoxious to this Disease, because they most abound with serous Particles. A Cure is very difficult in old Men, in that their Obstructions are not so easily opened, because of the Hardness of their Fibres.

§. 13. Dietetic Cure.

THESE Things being explain'd, we must now come to the *Dietetic* Cure. Let the *Air* be clear, hot and dry, which may be amended with burning Juniper-Wood, Rosemary, and Leaves of Bay-Tree. On the other Hand, a cloudy, rainy, moist and cold Air must be avoided; for such an one is an Enemy to the Animal Spirits, and thickens the Blood, and thereby deprives the Spirits of their Commerce.

Let the *Meat* be attenuating, and taken in due Proportion, but it is better to eat too little than too much. Broths of Capons, Hens

and Pullers stuff'd with Cephalic & other Herbs are very good. Pheasants also are wholesome; but all Meats whatever must be seasoned with Cinnamon and other Aromatic Herbs. Such Meats as are crude, windy, cold, and salt must be forbidden. As also Pulse and all Pot-herbs, no less than Milk-Meats, and other Things of the same Nature.

Their *Drink* must be small Wine, Pisan, and small Beer. *Tea* and *Coffee* are very good. They must by all means forbear drinking Spring Water, or swilling of any strong Liquor.

Sleep must be kept off as much as may be, by pinching, pulling the Hair, and if need be, by pulling the Limbs, or by putting under their Noses Fumes of Sulphur, *Castor*, *Galbanum*, *Sagapenum*; also Spirit of *Sal Armoniac*, must be put to the Nose. The Ancients us'd to irritate the Fibres of the Nostrils with the sharpest Vinegar.

Instead of *Exercise* let them be soundly rubb'd all over with rough Cloths, especially their Feet and Hands; and they must be often mov'd from one Side of the Bed to the other.

As to what concerns the *Excreta* and *Retenta*, All possible Care must be took that the Belly be loosned with Clysters, Suppositories, and other such like Catharticks.

Amongst the *Passions of the Mind*, Joy and Mirth are to be endeavoured. To this purpose, Friends are to be call'd in, who by keeping a bustle with the Sick Person, may interrupt his Sleep. Melancholy, Sadness, Cares, Fear, &c. are to be avoided.

§. 14. *Pharmaceutic Cure.*

THE Ancients, who followed Galen's Methods, make use, in this Distemper, of these Preparatives; A Decoction of Sage, Hyssop, Time, Marjoram, Betony, Pennyroyal, Fennel, Smallage, Maiden-Hair, Bawm, Roots of Butchers-Broom and Grass; to which Decoction they add Honey of Roses, or Oxymel. When the Distemper has took deep Root, they then encounter it rather with Purgatives, which are these; *Hiera Diacolocynthides*, *Diaphanicon*, *El. Indum Maj.* Trochiscs of Agarick. They also sometimes advise to vomit with a Decoction of Rhadish, Orrach, and Vinegar of Squills, &c. After that they are wont to prescribe Clysters of Mallows, Chamomil, Sage, Marjoram, *Origanum*, Centory the less, Rosemary, Betony, Fennel-Seed, *Colocynthis*, Agarick; in the Colatures of which they either dissolve *Hier. Logadii* or *Electuarium Diaphanicon*, Oil of Chamomil, Rue, Honey of Roses, &c.

Amongst these they are wont to use Suppositories of Honey with *Species Hiera picra*, and common Salt, or *Sal Gem*.

Those Things are by them call'd *Revellers*, which can avert the Humors, and rouse the sick Person in these Distempers, as Venesection, Clysters, Suppositories, Rubbing of the Palate and Tongue with Honey and Vinegar, in which is mixt Pellitory of Spain and Mustard-Seed. The extreme Parts of the Body are to be rubb'd until they are red and sore, which also, they say, must be pinch'd, stung with Nettles, and prickt, and the distemper'd Person must be violently

pull'd by the Hair of the Head, stir him up and avert the Matter. They command the Application of Cupping-Glasses to the back parts of the Head, as also to the first or second *Vertebra*, and likewise to the Buttocks and Thighs. They advise Errhines of Vinegar, in which are boild *Origanum*, Time, Pennyroyal, &c. and to snuff up the Nose the Vapors that arise from them. They endeavor to raise the Spirits of a Person with a Suf-fumigation of *Galbanum*, Castor, *Assa ferida*, *Amphorbium*, Sulphur, Pitch, Horn, Mans Hair, and other such Things.

The Ancients think that Lethargicks may be raised by a Crains Crains heated in a leaden Vessel, and the fore-Part of the Head anointed therewith; and they also will imagine that the Eyes, Heart, Gall of a Nightingale, as also the Head of a Bat (these being warm and full Creatures) laid under the Patient's low, will keep the Patient awake.

They use Gargarisms and Anaphlegmarisms: Also Irrigate the Face with Foment the Head shaven, and especially the fore-Part, with a Decoction of Rue, *Origanum*, and other Aromaticks. Neither do they neglect Sinapisms of dry Figs, Mustard-Seed, Pigeons-Dung, *Cantharides*. Last of all, they are wont to amend the remaining Intemperature, and to corroborate the Head with the Strengtheners, such as Conserve of Betony, Marjoram, *Diamoscu* *Diambra*, Mithridate, Treacle, &c. *se& Anacardina*: Outwardly, with Oil of Castor, *Ol. Nardinum*, &c. Also they would have Perfumes of Castor, Pennyroyal, Time, &c. to be neglected. They think also that Oynments of Castor is wonderful good for

Head in this Distemper. And they lay to the Head shaven, with good Success, a Bag of Miller-Seed and Salt roasted.

§. 15.

WE will now, having done with the *Galenists*, proceed, according to the Order of our Method, to the *Paracelsists*, and, if we may be Choosers, we will follow those who commend in these Distempers the Philosophick Spirit of Vitriol, and the Volatil. For *Paracelsus* himself *de Alchymia* says, that a Lethargy being a Mineral Distemper, is not to be cured by Decoctions out of Apothecaries Shops, but by Minerals. A certain Man, he says, after a Fever, fell into such a deep Sleep, that he was not sensible when prickd, nor could open his Eyes, or speak one Word, but lay just as if he were dead, being in a Lethargy, whom he cured with Oil of Salt, as he likewise did another with Oil of Vitriol. Oil, Milk, and Quintessence of Sulphur, are in the same Esteem. In another Place he commends in these Distempers a twofold Arcanum, *Vitriolatam* and *Mercurius Solis*, which he would not call *Aurum Potabile*, (not liking, perhaps, the vulgar Appellation) but gives it the new Name of *Horizon*. Amongst Minerals, he affirms, that the Essence of Antimony has a specifick Virtue in quite rooting out the Cause of this Disease, and mightily strengthening Nature, and this he also us'd in many other of the most grievous Diseases of the Head. The Madness and Envy of Chymical Knaves hinders me from divulging the genuine and truly Philosophical Preparation of this and other Arcana. Out-

wardly this Author commends Balsam of Aloes, Myrobalans *Chebul. Bellyr. Ind. &c.*

§. 16.

HElmont magnifies the Roots of Carline Thistle, and also the Juice and Extract, all which, he says, do by sympathy drive away Sleep, and most of all, that which is preternatural. He also says, that what he advises in the other soporiferous Distempers are proper in this. But to repeat all these Things would be impossible.

§. 17.

NOW comes *Willis* upon the Stage, who takes this Method in the Cure. After the Injection of a sharp Clyster he advises Venesection, and rather in the Jugular Vein than the Arm, because the stagnating Blood is by this means brought to a more equal Circulation. He commands large Vescatories to be applied to the Neck and Thighs, and the Temples and Face to be anointed with Oil of Amber or Cephalic Balsams. He orders Cataplasms of Rue or Crowfoot with black Sope and Sea-Salt beat together into a Pultis to be laid to the Soles of the Feet. Rough Frictions, according to him, are to be used to the outward Members. He highly commends Scarifications, Errhines, Sternutatories, and Apophlegmatisms. Inwardly he uses these Medicaments. If the Lethargy proceed from Surfeiting or Narcotics, then he thinks that a Vomit of an Infusion of *Crocus Metal-lorum* is most convenient. After this he furnishes us with appropriate Cephalicks, as divers Volatils.

tils. Amongst outward Applications he is for having the volatil Salt of Urin, or Spirit of *Sal Armoniac*. often held to the Nose.

§. 18.

Sylvius thinks the Cure of this Distemper consists in altering and evacuating the redundant Phlegm (as was said above when we spoke of the Cause) and also in correcting the Choler that has a Narcotic Quality. To answer this Intent he commends the Roots of Flower-de-luce, *Acorus*, Galangal, *Calamus Aromaticus*; Leaves of Marjoram, Sage, Bay-Tree, Hyssop, Mother of Time, Wormwood, *Carduus Benedicus*, Mint, Flowers of Centory the less, Chamomil, Seeds of Bastard-Lovage, Anise, Caraway, *Nigella*, Berries of the Bay-Tree, of Juniper, Gum *Opoponax*, *Galbanum*, *Bdellium*, *Ammoniacum*; and he highly values almost all Aromaticks, in that they cut the gross Phlegm.

Amongst Evacuators he makes choice of Agarick, Turbith, full of Gum, *Colocynthis*, and any Preparations of Mercury. Furthermore he asserts, that the Bile, which is often endued with a Narcotick Quality and occasions a Fever, is corrected by Things that are aqueous, acid, &c. And in this Case he prefers Oil of Sulphur *per Campanam* before acid Spirits, and says, That next to it is Spirit of Nitre.

§. 19.

THe Followers of Cartes, who seek for the Cause of this Distemper either in the Scarcity of the Animal Spirits, or the Subsi-

dence and closing of the Pores of the Brain, occasion'd by a great Inundation of Pituitous Humors, as was said above, do therefore attempt the Cure with volatile Aromaticks, which restore the Spirits, open the Pores by means of their Volatility, and do cure by dissolving the viscid Matter. They commend Castor and other penetrating Things of the same Nature that is, such as consist of very subtil and subtle Parts, and therefore can more easily pass through the Pores, irritate the Spirits, and dissolve the Phlegm. And because this Distemper proceeds from viscid Matter, they argue that such Things are to be used as consist of small and slender Particles, so that they may easily insinuate themselves into the Pores, and may be byassed by the striking of other Particles that they meet with such as are all spirituous Things and volatil aromatic Salts; as *Woods*, *Guajacum*, *Sassafras*, *Ros*, of *Masterwort*, *Elecampane*, *Calamus Aromaticus*: Leaves of *Basil*, *Bawm*, *Origanum*, Sage, *Marjoram*, *Time*, *Rosemary*, &c. For all these Things consist of rigid and hard Parts, but yet thin and slender, whence they have the Power of penetrating, cutting, altering and dissolving gross Humors.

They also magnify Sternutatory or Sneezers, insisting upon the fore said Method, because they break such stiff Particles and partake of certain Acrimony; for no sooner do they touch the little Membranes, but they twitch them, and thereby irritate the Spirits to such an excratory and Spasmodick Motion. We say nothing here of Preparations and Purgers, and external Medi-

ments, seeing that an understanding and ingenious Reader, may be furnished from our own Method of Cure, which now follows.

§. 20.

In giving the Causes of this Malady we blam'd a virious Acid obstructing the Pores of the Brain, and therefore Our principal Intention in the Cure must be, That the Animal Spirits, sticking in a viscid and acid Matter, may be set at Liberty, and the Mass of Blood be freed from its Viscidity and Clamminess, which not without Reason we commend as the greatest Secret to a Successful Practice in this Distemper. Therefore being furnished with these Indications, we pass to the Cure. We commend volatil Spirits in General, as well of Vegetables, out of Cephalics, and their volatil Spirits, as of Animals, out of Man's Blood, *Matthioli's* Quinquessence, volatil Salts of Amber, Stags-Horn, Secundines. That none but the Remedy the *Liquor Cornu Cervi* is best, the nervine Liquor of Castor, Castor and its Tincture both outwardly and inwardly are available. Nor are volatil oily Spirits, prepar'd of the Oils of Aromaticks to be neglected, but especially if they be mixt with spirituous Things, as volatil Salt of Iron, they do admirably draw the Animal Spirits out of that viscidous acid Matter in which they are set fast, and do correct and dissolve the acid and viscous Mass of Blood. Thus much of the General, now we proceed to the more special Remedies. As soon as we come at the sick Person, without delay we order Frictions, Anointments or Prickings. For the

Patient is roused by Pricking, because whilst that you prick and pinch the Extremities of the Nerves, the Pores in the Brain and Nerves are opened, and so some become greater some less, by the Variation of which, way is made for the Spirits to flow into the Nerves. Lethargicks are sometimes raised by Pricking, because some few Spirits still remain in the Nerves, so that they can convey the Motion, that is made by a strong Pinching, to the Brain. Neither are the Nerves ever wholly without Spirits, for always, so long as a Man is alive, there are some still remaining in the Body. We also use to lay Vescatories to the Nape of the Neck, and sometimes behind the Ears; and to the Tongue, Nostrils and Temples we apply Spirits of Castor, Amber and Urin. *Ex. gr.*

Take of Spirit of Wine camphorated, *Sal Armoniac* aromatized of each a Drachm, Vinegar of Amber and Rue of each half an Ounce. Mix them. By the Use of this you will find much Benefit.

Afterward we take Care to give sharp Suppositories or Clysters (Of which below). But if the Distemper proceed from Gluttony, or the unseasonable Use of some Narcotic Medicament, or if there be any Fear of the Patient's having took Poison, then Vomitories are an immediate Help, as *Hippocrates* and Experience testify. And here also spirituous and sulphureous Things will contribute more to the Cure than saline, in as much as spirituous Things have regard to the noxious Impressions made by the Narcotic Spirits,

Spirits, by putting them into Motion, and agitating them anew, as Acids do hinder their Impression, which *Ettmuller* observes as well as we. But if the peccant Matter flow in great Quantity to the Brain (as is usual) and causes a Cough and Difficulty of Breathing, we may use, as a present Remedy, four or five Drops of Balsam of Sulphur with Turpentine dissolv'd in Syrup of Jujubes, which the noble *Horselius* gave with extraordinary Success. And we endeavor to awake the drowzy Spirits with Sternutatories, and also with *Wedelius's Euporiston*, or the following Remedy.

Take of Water of Marjoram, Lily of the Valleys, Flowers of the Line-Tree of each half an Ounce, white Vitriol two Scruples. Mix them for a Draught.

Internally we must for some Time persist in the Use of Apopleptic, spirituous and odoriferous Waters, as the Spirits of Lily of the Valleys, black Cherries impregnated with volatil Salt. Our own Antilethargic Specific is this which follows.

Take of Powder of Castor one Drachm, Mustard-Seed, Garden-Cress-Seed of each a Drachm and a half, Ashes of Swallows, prepar'd Amber of each a Drachm, Ambergris half a Drachm, Leaves of Gold No. three. Make a Specific Powder. The Dose is from a Scruple to a Drachm, to be given in some spirituous Apopleptic Water.

Or, It may be given in a liquid Form, as follows.

Take of the *Liquor Cornu Cervi* one Scruple, Tincture of Castor, of Amber of each half a Scruple, Water of the Flowers of the Line-Tree two Ounces and a half, of Swallows with Castor one Ounce, Syrup of Peony two Drachms. Mix them, and take it by a Spoonful at a Time. Or, Take of Spirit of Saltpetre with Amber, of Secunda of an Elks Hoof of each a Scruple, Water of Bawm, Lavender of each an Ounce and an half, Swallows with Castor, Syrup of Cinnamon of each an Ounce and a half. Mix them. Or, Take of Oxyrhina Squills two Drachms, Spirit of Armoniac half a Scruple, Syrup of Carduus Benedictus an Ounce and a half. Mix them. Or, Take of Species of *luna Mysichti* three Drachms, Magistery of Castor two Scruples, Chymical Oil of Rue six Drachms. Mix them, and divide it into equal Parts, which may be taken in the following Mixture. Of Water of Rue three Ounces, Cephalic Water one Ounce, Scented Oil of Squills an Ounce and a half. Mix them.

These Medicines will be very useful, which if you join with Purgers, you answer several Intentions. *Ex. gr.*

Take of Refin of Jalap one Ounce, Grains, Tincture of Castor one Ounce, of each eight Grains. Which may either make into Pills with Conserve of Roses, or Flowers of Marjoram made into Syrup. Or, Take of Pil. Agarick half a Drachm, Refin of Agarick of each three Grains, Magistery of Amber four Grains, Salt of Amber three Grains.

of Marjoram two Drops. Mix them, and make fifteen Pills. Or, Take of Castor two Scruples, Scammony sulphurated one Scruple. Divide it into two equal Parts, and give it in Oxyssel of Squills.

Besides what we have named above in the Dietetic Cure, the ordinary Drink must be a Decoction of Tea, or the common Woods, *Guajacum*, *Sassafras*, with aromatic Herbs, as Leaves of Marjoram, Betony, Rosemary, Flowers of the Line-tree, Roots of Peony, &c. For a specific we commend a Decoction of Swallows with the Flowers and Wood of the Line-Tree. We might say much more of this Nature, if I would humor a wonderfully Drunken & carping Age, which however we designedly omit. But as *Virgil* gathered Gold out of *Ennius*'s dung-hill, so may every Physician, that is any thing skilful, make more choice Collection out of that has gone before.

In the last Place let Cupping-glasses be applied both with and without a Flame; also Vescicatories, Blisters, &c. If all these Things do no good, recourse must be had to that often mentioned Infusion of volatile Liquors into the sick Person's Veins, Which, notwithstanding, I think must be omitted, also Venesection, to avoid the Humors of the Vulgar, because when the Patient dies they lay the blame upon them.

Clysters in this Case are many times convenient, which ought to be so sharp, as by irritating the Intestines to rouse up the distemper'd Person, and powerfully cut the gross Humors. Therefore they must be made of Cephalic Herbs, some sharp

Purgers being added; or one or two Drachms of Seeds of *Daucus* of *Cret* may be boiled in Whey, and half a Drachm of the Pulp of *Coloquintida* may be tied in a Rag, adding two Drachms of *Sal Gem*, and Salt of *Carduus Benedictus*. Or let this Clyster be prepared.

Take of Wormwood, Centory the less, Leaves of Rue, Betony of each a Handful, Root of Pellitory of Spain three Drachms, Pulp of *Coloquintida* tied in a Rag a Drachm and a half. Boil them in a sufficient Quantity of common Water, to eight Ounces of the Colature add of Electuary of *Hiera* with Agaric an Ounce, Oxes Gall thickned a Drachm, and the Yelk of one Egg. Make a Clyster.

Great-Dock Root, Barks of Tamaris-Tree, Shavings of *Guajacum* and Bryony-Root, to the Quantity of two Drachms, are also good in Clysters.

Stinking Things are to be held to the Nose, such as Spirit of *Sal Armoniac*, Castor, or this which follows.

Take of Oil of Tartar per Deliquium two Drachms, volatil *Sal Armoniac* half a Drachm. Mix them, and let them forthwith be put to the Nose.

Boil some of the sharpest Vinegar with Castor and Rue, and *Nigella*-Seed, pour it upon a red hot Iron, and let the Vapor pass into the Nostrils of the sick Person.

Sternutatories in this Case are extremely beneficial, and most of all this which follows.

Take of the Powder of *Virginia Tobacco*, *Marjoram*, *Lily of the Valley* of each a Scruple, *Castor* half a Scruple, *Volatil Salt* of *Urin*, Powder of white *Hellebor* of each four Grains. Mix them and make a Powder.

Let a Cataplasim of *Radish*, *Vinegar*, *Salt* and *Leaven* be applied to the Soles of the Feet.

For an *Oxyrrhodinum* we commend this which follows.

Take of Water of *Chamomil* an Ounce and an half, *Treacle Water* in which *Castor* is extracted an Ounce, *Ashes* of *Man's Hair* as much as you will. Mix them.

Those *Ashes* must be used because they contain in them a volatil Salt.

But Physicians do very ill to use *Vinegar* with *Oxyrrhodinum*, because it does too much bind the Pores.

Ligatures to the extreme Arteries are often to be untied and tied again because that changing very much affects the Soul.

A *Sponge* held to the Nose with *Juice* of *Smallage*, *Vinegar* of *Smallage* and Powder of *Castor* will be of great avail.

Take of *Smallage* three Handfuls, *Flowers* of *Nigella* and *Flowers* of *St. John's Wort* each a Drachm, *Castor* a Drachm and a half. Make a Bag according to Art. Or, Take of *Vinegar* of *Smallage* two Ounces, *Juice* of *Smallage* newly drawn half an Ounce, *Sence* of *Castor* two Drachms. Mix them.

CH

CHAP. VI.

Of a Waking Coma.

§. 1.

A Waking Coma (which some call *Pervigilium*) is a morbid Somnolence, and an excessive propensity to sleep, which makes a man shut his eyes, but though he settle himself to sleep, he cannot take the least nap. Patients in this Disease are delirious, and act strange Absurdities. At first they find a dulness in their Heads, with a stupidity of all their senses.

§. 2.

It differs from a sleepy Coma, because in that there is actual sleep; in a waking one sleep is hindered, and the Patients dote. But I shall say more of this, when we come to the Causes.

§. 3. Part affected.

He Physicians commonly take the Brain for the place affected, some make it the *Cerebellum*, others, the *Helmotitians*; make it the *Brain*, some the globous part of the *Brain*, some the cortical part, others the *Glandula Pinealis*. We reckon the part affected to be the Pores of the Brain, and other

Bodies containing the animal Spirits, through which these Spirits, free from any taint otherwise, being put upon their duty, do rove, and like a daring and disobedient Souldier, run through all things and influence them.

§. 4. Diagnostick.

A Waking Coma is so well known, that we need no Signs, but what were given in the Definition before. However, if the Patient should dissemble, some conjectures may be made from the redness and heaviness of the Eyes, and likewise from want of motion, stiffness and driness in the Eye-lids. They are not themselves. *Helmont*, in the Dedication of his Book, mentions a couple, who were sick of this Disease, a Spaniard and a German. He observed that the German sat or laid in that very posture wherein they placed him, as if he had been a Statue. He was not able to give an Answer to what was asked him, nor did he understand what his Wife or any of his Children said to him, except it were in his own German Tongue; whereas at home he constantly used to speak Italian and French. Nay, after he was cured of this waking

Coma, he could scarce be perswaded to believe it.

The Patients sometimes shut their eyes, but cannot go to sleep, they dose and look down, they are perpetually prating absurd stuff, tossing their Arms and Legs to and fro, they look stern on those that wake them, they are vertiginous in their sickness, enclining to vomit, and most of them are lean. This Disease rarely comes of it self, but for the most part accompanies or follows a Phrenzy, Madnes, or some other Cephalic Disease. Now for the Cause.

§ 5. Cause.

THE Galenists (who are for their All-fours in Complexions, Humors, and first Qualities, which Hippocrates, Helmont, and others have strongly opposed, as a thing destructive to Physick and Natural Philosophy) derive the Cause of this Disease from a mixture of Bile with Phlegm. For if Bile (according to their way of speaking) do more abound, they hold that a Waking Coma is bred; but if Phlegm exceed, then a sleepy Coma. And there are some of this Sect to be met withal, who endeavour to evince by Reason, that this Disease arises from bilious and phlegmatick Vapors, and they prove it by Fernelius his authority, who says, as if he were the Infallible, that Waking is caused, when a hot and sharp vapor attenuates and disperses the Spirits above measure: But these are like Penelope's Suiters in Homer, who instead of her courted her Maids; we will therefore see what Paracelsus says, though he is too much of the like stamp.

§. 6.

THE Paracelsists do in the least blame sulphureous Exhalations, which cause a Coma. For after their way of thinking these Vapors are of a different nature and property, as the nature of the matter whence they arise differ. And these Vapors are to cause Watching, unquietness and Doting.

§. 7.

THE most sagacious Helmont have the Stomach to manage the whole Body by Spirits, and places the administration of vital offices in the Hypochondria in the Spleen and Stomach. These two with him make up a virate, and command the Parts, from whose unquiet and disturbed Government he thinks Watching proceeds.

§. 8.

LET us now see what Paracelsus says. He makes the Cause to be a two great agitation and expansion of the animal Spirits. Which animal Spirits are in his opinion like Sentinels on duty, free from all impediments, undisturbed in their rest, and not by external, mediate Causes. For instance, by some sharp Medicine, by Worms, &c. When the Spirits are put in action upon continual duty by any more Causes, by a blow, or a vulsion or Pain caused elsewhere, whereupon it cannot otherwise be but that want of Sleep results. Now in preternatural waking

Animal Spirits being too fierce and
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 ves within their place; where-
 by being too much expanded,
 they keep the Brain and Nerves
 close, and when at any time they
 feel a tumult in the Brain, they
 likewise raise various *Deliria*, and
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 times the fierce and eagre Spirits,
 when they are recalled, do fall
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 Waking.

§. II.

Our own Opinion, Is, That the Brain, being kept in continual action, sends too many animal Spirits to the organical Parts, which Spirits tarry longer than they ought in the external Parts, out of their proper place, and so when they are become too sharp and subtil, do not easily return to their former quiet state.

The Antecedent Causes are either a thin and sulphureous Blood, or too much diluted with sharp Bile, and excessively effervescent: all which things may produce fiery animal Spirits. For we think that the most part of the Bile is by its volatil Salt converted into animal Spirits, and as we have proved before, that Bile is the cause of Madness, so it may be the preternatural cause of want of Sleep; that is, where it exceeds, and is carried beyond its bounds. And that of the Philosopher, *Democritus*, confirms this, who answered the Physician *Hippocrates*, That Anger proceeds from the swiftness of Bile, which according to *Horace*, *Furor brevis est*; by the acrimony whereof the Animal Spirits are enflamed. And as in the former Chapter we observed, that some Mad-men in a fit of Anger, are so fierce and hot, that they regard not the greatest Cold, but are as strong as *Hercules*, and that cholerick Persons do not sleep so long as others. So likewise when abundance of Blood moves too impetuously, too many animal Spirits are bred: And the Acid and Saline being too sharp, there is observed a greater effervescence of Blood, and the Spirits arise in greater quantity. For the motion

is here more acute, great and frequent, by reason whereof too many the Spirits already bred are made the quicker, but are sent in great plenty from the Brain. And see this in Madness, burning fevers, and *Deliria*, where Salubrious humors are peccant in the Body by their acrimony, the who are sick of those Diseases forced to wake constantly. It is found also by daily experience that if at Supper we eat acrid or salt things, yea, or spiritous and sharp things, we usually that Night without Sleep, and for the same reason Bile may do the same thing. And they call this thing, who through want of study, carefulness, and such like cannot for some considerable time get any Sleep; because the acrimony of the Bile is increased, whereby the animal Spirits are made too sharp.

All grievous sensation, vexation, erosion, and pain do really hinder Sleep, in as much as they affect and vellicate the Organs of the Senses, and the animal Spirits residing in them. Intent Thoughts, Cares and Grief disquiet the animal Spirits, keep them from duty, and by agitation assume the kindly Part, and an acrimony of Humors. excessive Watching is caused by Blood too spirituous, and by any excess of Spirits.

§. 12. Prognostick

AS for the Prognostick, *Hippocrates* says, In waking Convulsion and Dotage are bad over in Want of Sleep, and is of bad Portent: for there is a translation of the

matter to the Lungs which breeds a Consumption. *Helmont* observed that want of Sleep with solicitous Meditation caused an *Asthma*. It must of necessity cause Weakness, Consumption and drying of the Body, because the oily and fat Parts are fretted off by the acrimony of the Blood. If it continue long, it causes Madness; and in a weak subject Death, by extinction of the animal Spirits in the outer Parts, and a total one at length in the brain. Sometimes it is attended by a Cachexy; for through defect of Spirits, the Blood is made both thicker and more tough and clammy, whereby both the fermentation in the Guts, and the vital effervescence in the Heart are diminished. It is hard to cure in old Men, *Mecenas* may be an instance, who, as *Pliny* l. 7. c. 51. writes, had a perpetual Fever, and slept not an hour at a time for three years, if you will believe him. However Reason is on his side: for old Men abound with sharp, ferous, salt, briny humors, whereby the animal Spirits are greatly enraged. Want of Sleep arising from Study, solicitous Meditations, Pain from any Cause whatever, Grief, Fasting, strong surges, &c. is easily cured, when these things are removed.

§. 13. Dietetic Cure.

Et the way of living, which consists in the Six Non-naturals, be as follows;

Let the Air be cold and moist, and the contrary be avoided. For who of us all is of so hard and strong a Body, as not to find himself much refreshed or offended by external blasts in an open Air?

The Meat must be easie of concoction, cold and moist, such as Chervil, Lettuce, and Broths of divers sorts. The Meat must be boiled, not fried or roasted; all corrupt sharp food must be avoided as Poison, which often occasion this Disease: for we have it from the Observations of famous Men, that sharp Sawces and Dainties have caused continual Waking, as has been intimated before, all which things sharpen the Humors, and cause Effervescences.

Excess in Food must be avoided, and flatulent things: but all that are ill of this Disease, especially that abound with an acid, are best in health, if they take some Food: for such Patients cannot well endure fasting, as I observe in my self; for I cannot sleep with an empty Stomach, but usually wake all night.

Drink must be a Decoction of Barley with Liquorish, or Beer well wrought, with Cowslip-flowers boiled in it, or an Emulsion of Almonds and the four cold Seeds, with a little white Poppy Seed, all which things do greatly correct the acrimony of Bile and other Humors, and compose the Spirits. Rich Wines and spirit of Wine, spirituous Waters, and such things are often the Authors of this Disease, because they do not only increase bile and other sharp humors through all the Body, but they force its motion, and spoil its consistency, and kindle the animal Spirits. Therefore we exclude all such things.

Motion must be moderate, and Rest must rather be enjoyed.

Sleep must by all means be procured, either by pleasant discourse of Friends, or by harmonious

nious Musick, or by the murmuring of Waters, or by being carried, or by rocking in a Cradle, or by Medicines, of which we shall speak hereafter. On the contrary, all things must be avoided, which may cause watching.

The *Belly* must be loose, not costive, and all other Evacuations usually made by Urine, Sweat, *Menses*, or *Hæmorrhoids*, must have their course either by Nature or Art, which, if they be stoppt, cause many Distempers.

The *Passions of the Mind*, because by their various alterations they disturb the Spirits and Blood, must be kept within due bounds of Moderation: for all excess is an enemy to Nature.

But above all others, Anger must be avoided: for it encreases the acrimony of the Bile, which disturbs and puts the Animal Spirits in a fret. For you may observe that Angry men cannot rest in one place, they are in a heat and toss, and if they bite, their Teeth leave some venom behind them. For I once heard a Cause tried before Judges, about a Man, that in his Anger had given his Neighbour an incurable Wound with his Teeth. All care, trouble, and deep thoughtfulness, because they disturb the Spirits, must be reckoned among things Prohibited.

§. 14. *Pharmaceutic Cure.*

AS for the *Pharmaceutic Cure*, the old *Galenists* cure a waking *Coma* idiopathick, and a Phrenzy with the same Medicines. Therefore I shall refer the Reader to the third Chapter of the Phrenzy. But if it come by Sympathy, they make use of Revellers and

Repellents: for they order Bleeding in the Arm and Foot, and apply *Oxyrrhodina* to the Forehead, they give Clysters and apply Bleeding and Leeches behind the Ears, to draw back the Vapors (after the manner of talking) from the Head. When sharp Vapors are cast out from the Stomach, by reason of bad Digestion, to the Head, they use *Diatrion Piperis*, and aromatic Powders, to help the retentive Faculty and Concoction of the Stomach. But if any matter lie in the Stomach, they give *Oxymel* of Squills, and other things. In consumed and tick Bodies, they endeavour to cure watching by Emulsions of sweet Almonds and white Pease seeds, with Broths of fennel and Baths, wherein they are bathed properly. They give red Wine to Drink. They anoint the Temples and Nostrils with Ointments of *Roses* and *Populeop*. They commend a Bath of fresh Water, and other moistning things. We observe before that they accuse the Stomach, namely, when divers biting Vapors ascend from it, which happens in malignant, and in burning Fevers, as well as in this Disease. Therefore to evacuate the Bile, and other sharp humors and vapors, they begin with Vomits and Purges; then they embroil the Head, that they may alter the Brain, and repress the vapors. At last they fly to Anodynes and Narcoticks; and lest the vapors should ascend to the Head, they make Ligatures in the lower Parts.

§. 15.

THE Chymists, and among them the Paracelsists, who think (as I said before) that sulphureous and sharp Exhalations are the Cause of this Disease, recommend divers Hypnoticks and Anodynes, both Internal and External, for the correcting of those Exhalations.

§. 16.

Helmont, after his usual manner, having inculcated several things about the tribe of Alkali's, of the power of the *Duumvirate*, of the Gall, and innumerable things beside, supposes the Disease to lie in the Stomach and Spleen, and the *Duumvirate* to be affected, and therefore writes, that it is better cured by Stomachicks than by Cephalicks. At first he orders a Vomit, then divers Stomachicks both internal and external; such as *Elixir Pro-prietatis*, Oyl of Nutmegs, and such like.

§. 17.

Willis, rejecting the unreasonable use of Opiates, which by experience he has often found hurtful, does in the most commendable watching advise People, when they go to bed, to drink a sufficient quantity; that is, about a quart of Ale; or of Emulsion made of the four greater cold Seeds and Almonds, or of Juleps, Decoctions, &c. The rest of the Cephalicks, which we have mentioned already in other Diseases of the Head, especially in the Chapter of the Phrenzy must not be neglected.

§. 18.

Sylvius, if a waking Coma have its rise from Pain, does the business by Anodynes, both internal and external. If Passions of the Mind exagitate the Animal Spirits, and preternatural watching arises from thence, he thinks they must be appeased by the discourse of some eloquent Friend. Also the excessive agitation of the Animal Spirits must be laid, and the Mind must be pacified as much as can be by various appeasing and mitigating Medicines, of which he recounts a prolix Catalogue. But if the Disease proceed from a sharp volatil and salt humor, to correct the acrimony, he prescribes divers oily emulsions of Seeds, and various Anodynes, above all which he far prefers the anodyne Sulphur of Vitriol.

§. 19.

THE Cartasians in this Disease, where kindled & boiling Bile, which causes the Blood to ferment, does predominate, do judge that it must be evacuated by Cholagogues and corrected by acids. But if the over thick Particles of the Blood cause a dilatation of the Pores of the Brain, and stimulate the acid juice from the places where it is lodged, to motion, and thereby encrease the effervescence of the Blood, then they advise things quite contrary, i.e. such as correct an acid, and at first Spirit of Wine above all things. And indeed the cure of this Disease, according to their *Hypothesis* does principally consist in Medicines that take off the acrimony, and repair decayed Strength, and in Sudorifics,

sicks, which by volatilizing the sharp Particles force them out of the Body.

§. 20.

Hitherto we have given you other mens Cures, now we will rather propound than obtrude our own young Experience. If therefore the Spirits be disquieted by a too great quantity of Bile, and waking be produced thereby, it must either be purged off by Cholagogues, or, if the Bile tend upwards, by Vomit; for what way Nature tends, that way we must follow. Our Cholagogue is either *Electuarium Sylvii purgans*, or Pulp of Tamarinds, Prunes, &c. For Vomits we use *Sapa Antimonii*, *Tartarum emeticum*, & *vinum nostrum emeticum*. But stronger Vomits must be given with great caution. And if the animal Spirits be put out of order by the acrimony of Bile and other humors, namely of the *Serum*, (which is now called *Lympha*) they must be reduced to their former state, which I have very successfully done with the following Julep.

Take of Water of Vervain four Ounces, Lettuce, Phlegm of Vitriol, Syrup of Roses each one Ounce and an half. Mix them. Make a Julep to be drunk at several times. Or,

Take of Water of Plantain five Ounces, red Poppy three Ounces, distilled Vinegar one Ounce, Syrup of Quinces one Ounce and an half, *Tartarum Viriqlatum* two Drachms. Mix them. Make a Julep.

I am perswaded Emulsions are every whit as good as the things

aforsaid; which may be made of the foresaid distilled Waters, Decoction of Barley, with the greater cold Seeds and white Peas for they mightily weaken and lute the volatil Salt of the Bile. I have also given with very good success Opiates, *Theriaca celestis*, *danum opiatum Cydoniatum*, or our own way by a particular *struum*, *Tinctura Anodyna*, &c. For these things are excellent against the rage of such Diseases cause they amend the salinymony, assuage all Pains, and Scupetaction, hinder the emgeneration of Animal Spirits (which is an enemy to Sleep) and their motion, and thereby procure kindly Sleep, as I have often by Experience, especially Waking came from Pain. I should therefore always be endeavour to remove all manner Pain, which we may do by very easily, as I have successfully observed; nor could I ever receive the least damage from whatever some men, blinded by prejudice, may say to the contrary. Yet there must be this in the case, that there be no stake in the Dose, but that it be terminated exactly according to Circumstances, especially according to the strength of the Patient. They must be given moderately proper to be given at all. If you should give too much, it might either cause a worse Pain or Death it self, and so cast the Devil by Beelzebub. But if be given seasonably, they hinder the impetuous motion of the Spirits, they assuage Pain, and so cause whereupon there is a decrease of the effervescence, and clearing of Concoction do presently

themselves, there being a precipitation of the useful from the useless parts, and so there is a better *Crisis* made, and a secretion of the con-
 creted or precipitated matter, either by Sweat or Urine. And Opiates are good especially, where there is no Phlegm, but then they must be given in a small Dose. Of this nature are Camphore, *Sal Saturni*, and all narcotick Sulphurs of Metals. Half a spoonful of Tincture of *Opium* prepared with rectified Spirit of Wine would be of admirable use in this case, because by reason of its subtilty it sticks in no place, nor needs Obstructions, but rather by assisting a gentle Sweat carries the particles of the *Opium* out of the body. In case of weakness, where opiates cannot be taken inwardly without great hazard, you may use them externally with safety. Among externals, I greatly value the somniferous Mixture, which my good father *John Doleus*, an Apothecary, above Threescore years old, found great benefit by. It follows.

Take of *Unguentum Populneum*, *Alabastrinum* each half an Ounce, Swallows Blood one Ounce, Oyl of Nutmegs by expression one Ounce, oriental Saffron one Drachm, *Opium* dissolved one Drachm and an half, Oyl of Henbane seeds by expression, of white Poppy seeds by expression each one Drachm. Make a somniferous Mixture to be applied to the Temples spread on a Leather.

I have found by experience, that all things which correct the acrimony of the volatil Salt, are good in this Disease inwardly. Hence it is that I have found so great benefit to Patients of this nature from our

Balsam of Antimony, united with Oily and spirituous things, than which I have not found any thing better for appeasing the Spirits, and taking off the acrimony from any humors. All volatil oily Salts have the same effect, especially this following, *Sal volatile oleosum nostrum*.

Take of Salt Ammoniack, Salt of Tartar each one Ounce, volatil Salt of Harts-horn one Ounce and an half, volatil Salt of Amber three Ounces, Spirit of Urine two Ounces, Rain water four Ounces, Oyl of Cinnamon, Cloves each half a Scruple. Mix them, and destil them according to Art.

Volatil Acids do the same thing in a manner; because by coagulating the Blood more, they separate the abounding serum from it, and discharge it, when separated by Urine and Sweat. And out of volatil Acids we make choice of these, viz. *Tinctura Bezoartica Michaelis*, *Mixtura simplex*, &c. Spirit of Soot, and *Liquor Cornu Cervi succinatus*, &c. are good in this case. When the Blood is bilious and abounds with too much volatil Salt and so causes Waking, we must let Blood, especially towards the Evening, that it may the more easily cause rest.

An *Oxyrrhodinum* made of Oyl of Roses, and Vinegar of Roses, which has extracted a Tincture from *Opium*, is proper. Or,

Take of Rose-water six Drachms, Saffron one Drachm. Mix them for an Epitheme to the Temples. Or,

Take of the Marrow of a Calfs Bone, of a Stag fresh each half an Ounce, *Opium* dissolved two Grains. Mix them. Among

Among Externals we recommend Frontals, Oynments, Lotions of the Feet, Fomentations, &c. A Cataplasim made of Peach-stone Kernels, white Poppy Seeds and Womens Milk will do good. Balsams made of cooling Anodynes, Hypnoticks, and Narcotics are good, and several other things which Books of Practice are full of, too tedious here to relate.

The Feet also may be held in a warm Bath, wherein heads of Poppy, Chamomil-flowers, and emollient Herbs are boiled, to temper the acrimony of the Blood. Let the Soles of the feet be anointed with Goat's Suet.

It is our custom to put the Patient (yet due regard had to cir-

cumstances) into a Shirt wet in Water, and so leave him for an hour or two, within which time, Sleep usually ensues.

Here also we must obviate other Symptoms. For a Fever we may give a sudoriferous mixture of Minerals or other Specificks, before mentioned, to which we may add of Camphore two Grains, *Laudanum opiatum* half a Grain or a little more, Syrup of red Poppy ten Drachms. Mix them.

For Thirst we may give *Prunella*, and Camphore; or Spirit of Nitre may be dropt in Drink.

And Sleep must by all means be procured, lest the Patient fall into a Phrenzy.

CHAP. VII.

Of a Catalepsis.

§. 1. Definition.

A *Catalepsis* (by some called *Catochus*, by *Sylvius Prehensio*, à *Prehendo*; by some *Congelatio*, because they that are sick of this Disease are as stiff as if they were frozen; by others *Stupor vigilans*, because they that are taken with it, are void of Sense, and lose all Motion of their Body) is commonly described to be a sudden seizure of the Mind and Body, with a failure of the Senses, in which, he, that is taken with it, keeps the same posture of the Parts of his Body which he had, when he was taken; he remains sitting or standing, his Eye-lids are stiff, his Feet ready for a walk, his Hand stretched out to take something; and, in a word, he is a Statue alive. This is a rare Disease, yet we have some Instances in *Hippocrates*, *Galen Comment. in 1. Prorrh. Marcellus Donatus*, *Schenckius*, *Sylvius*, and others. As some were going up a Ladder, one in the midst of it being taken with a sudden stupidity stuck so fast to the Steps, that he could no way be pulled from it,

but kept others from passing. *Exchanan* brings this instance for an undoubted truth, *l. 6. de reb. Scoticis*. I saw one at *Hanover* taken with this Disease, and observed all things as carefully as I could, of whom I shall give you a History presently.

§. 2.

THis Disease agrees with an Apoplexy in this, that in the one as well as in the other, Sense and voluntary Motion are lost: But it differs in this, that the Animal Spirits are not so affected in a *Catalepsis*, as they are in an Apoplexy; for they remain quiet in the external Parts, and being forced out of their place, they cannot return to their former work-house, but then exercising their power upon the Muscles, they cause a violent extension or stiffness.

§. 3. A Case.

Our Cataleptick was about Thirry seven years old, of a choleric Complexion, he was quarrelling

ling in his Drink and mad with Anger, he was deprived of all his Senses, as if *Gorgon's Head* at *Perseus* his Marriage had been presented to him; though he kept his Eyes open, yet he did not see; his Eye-lids were stiff; he answered nothing to any question; his Hand was stretched out to reach something. I was amazed when I beheld him. In the mean while he had so much life left him, that he was able to breathe, his Pulse continuing strong and equal, with some little motion in his Breast. This Patient was well cured by the application of proper Remedies mentioned at the end of this Chapter; however there remained some numbness in the Parts, if you call it wearisomness, you mistake not.

§. 4. Part affected.

Authors do generally agree, that the Brain, the fountain and original of motion and sense, or (if you had rather) of animal Actions, is the principal Subject of this Disease. Some accuse the Membranous substance of the Spinal marrow. Some will have the Ventricles of the Brain to be the Part affected, in as much as they being violently extended by a cold gross Matter, do hinder the ordinary motion of the animal Spirits. Most take the *Cerebellum* and the origination of the Nerves for the Part affected. *Willis* and *Sylvius* prove that the Brain is not the Part affected, so much as the animal Spirits themselves. *Fonsæca* will have it to be the Heart. *Cartes de Pass. Animæ* p. 1. Artic. 31. & *de Homine* makes the *Glandula Pinealis*, the chief seat of the Soul, to be the primary Subject. For

he proves that when this is affected the usual Functions are not so performed.

Some of the Moderns as the Ancients do make the Brain to be the Subject, as it is a Part imbued with Spirits. *Montaigne*, that industrious Philosopher by Fire, makes the mouth of the Stomach to be the Subject of a Catalepsis, as it is of other sleep-seases. We take the *Cerebellum* the Appendix of the Nerves for the Part affected:

§. 5. Diagnostick.

THE Signs of this stupendous sease are very manifest. Patients on a sudden are speechless all stiff and immoveable, their senses weak and dull, they remain in the same posture wherein they were taken; for they shut their Eyes, if they were open before, look steadily on something. By-standers thinking; therefore are for the most part open and the Eye-lids are found stiff; if the Patient were sitting, he remains sitting; if lying, he continues in the same posture. There is a suspension of Stool and Urine, respiration continues entire and unhurt, appears by the rising of the *Breast* and *Abdomen*: For the Spirits are in plenty sufficient into the Channels of Respiration, and the Circulation of the Blood is still vigorous; it appears by the Pulse being one natural, that the effervescence and ferment of the Blood in the Heart, are good, and that the Blood circulates freely through the Veins. By this legitimate effervescence the Blood, Spirits are bred in plenty, which get into the Brain, no wonder therefore if respiration

free, while the Patient is as immoveable as a Rock,

§. 6. Cause.

As many Men, so many Opinions are there about the Cause of this most intricate Disease. The Ancients will have the Cause to be a cold and dry intemperature of the Brain, whence it happens that both the Brain and Animal Spirits are congealed and dry. They prove by reason that a cold and dry matter, such as Melancholy, frequently introduce this Disease. Wherefore among the remote Causes they place a very cold dry Air, also a mixture of Slegm and Bile, which, if they abound immoderately, may breed the same intemperature. And they do not only hold that the foresaid humors, but that Vapors of the same nature may cool and dry, as it were congeal the Brain Spirits.

§. 7.

The Chymists blame a narcotick Sulphur, which fixes the Animal Spirits. Some of them describe this congelation of the animal Spirits from a Mercurial Principle, indeed from a Mercury altered and distilled by change of degree, (they are the words of the famous *Roslinus*) *Spodium* put into Wine; so here the Mercury being put into a Rage by its own great Power, congeals Bodies and makes them stiff, as Sulphur acts on the Sword, not the Scabbard; on Money, not the Bag. There are some of the Chymists who feign to know not what Spirit, breaking

out of the Caverns of the Earth, which turned some Country People and the Cows, as they were milking, into Stone.

§. 8.

Helmont's Followers blame the *Archæus*, as having contracted a foul Light, kindled by acid corrosive Salts. For *Helmont's* Acidity, and *Eschentius* his Acid being strangers to the Sphere of their Goodness, and becoming salvage and hostile, do make dull and fix the Powers of the Brain.

§. 9.

Spiritus proves, That the animal Spirits are coagulated, like Spirit of Wine digested six Weeks by Spirit of humane Urine. Therefore he thinks, that in a *Catalepsis* the Animal Spirits are carried every way from the Brain by the Nerves, those conveyers of the Spirits; but in some sort coagulated and thickened, and so more dull and stupid, and not so moveable and fluid, as they ought.

§. 10.

The Cartesians do obstinately maintain, that this mutation can happen to such Bodies for no other reason, than that the *Glandula Pinealis* is obstructed on one or both sides. Therefore the immediate Cause consists in the obstruction of one or both sides of the common Sensory, and that in this Disease the Soul does not want an endeavour, but power to determine the Spirits. For they prove that in the Fit there is a Will to move the Parts, but that they cannot move

move them, no, nor so much as speak.

§. II.

W^E reckon that the proximate formal Cause consists in the Faculties having no power over the animal Spirits when they are imperiously let out of the Brain, and in the Spirit's not being able to get back again, because the way is by some means or other stop'd, yet still as new is bred passing in'o the Heart and Breast. For from whence can that unusual stiffness of the extreme Parts be derived, but from the Animal Spirits being forced at one push into the Muscles, and so puffing them up, like a Gut or Bladder blown up, and then tied? The *Cartesians* must acknowledge as well as we, that upon hindring the influx of the animal Spirits into the Muscles, the Limbs must immediately flag, like Sails without wind. But the contrary happens in our case, as all who have sense must acknowledge.

The Limbs therefore are not here flaccid but stiff. For we see in our case, that the Patient had given himself over much to Drunkenness and Anger, upon which he fell into this Disease, with a great stiffness of his Limbs and stupidity of his inner Senses. Who can think, but it must come from the Animal Spirits being sent out too plentifully from the Brain into the Limbs, and there being intercepted in their return? Some perhaps may object, that the motion of the Animal Spirits ought ever to be determined by the Soul residing in and about the *Glandula Pinealis*. But this falls to the ground, if we say that

the Animal Spirits may be just as our breath does in a bladder, when blown and tied, remaining tumid after we have away our Breath, and they may and overcome in the Limbs other Parts, by the Spirits that sent to the Breast; for respiration continues free. We may prove this by the Antecedents, for we will deny, that after Drunkenness and Anger, and other violent affections of the Mind, the Animal Spirits are made unruly. *Plac. prax. lib. 1.* observes that a *lepis* came from generous Wine for all these things increase flight and motion of the Animal Spirits, and invire them to desertion of their Place. When a Patient is spoken to and he answers not, it does not therefore follow that he hears not, because he deavours to answer; but he is unable to force the Spirits into the Muscles of his Tongue, so as to be heard. The *juvantia* and *nocentia* confirm this Opinion of ours; for all such spasmodicks do good. And there is one Obstruction in the Nerves, it follows from these reasons: for that the Animal Spirits cannot get back again into their place, and because of the justness as we said before: for all those that are able to destroy the obstructing viscid, and so to remove the impediment, are very useful such as volatil sharp Salts, &c. which more in the Cure.

§. 12. Prognostick

THE Prognostick certainly declares this Disease to be very dangerous, while the most valuable Part of the Brain is hurt, the Animal Spirits are forced

their Metropolis and Country : For (they are Pliny's words, l. 4. *Epist.*) in Empires, so in Bodies, the disease is most grievous, which proceeds from the Head. An imperfect Catalepsis, as it is attended by milder Symptoms, is less dangerous, and the more easie to Cure, by how much more difficult a Cure one more exquisite does require. For an exquisite one is always Mortal, as is proved in our Patient.

It is incurable, according to the excellent *Sylvius*, if it seize Old Men. On the contrary, Young Men in their full strength may more easily be cured, as it happened in our case. In regard of Cure, that is either which comes by Sympathy, or an Essential one. If but few animal Spirits remain in the Head, when the case is very dangerous, especially if the origination of the Nerves be obstructed by the viscid humor. If it come from Narcolepsies, in some mens Opinion it is exceedingly dangerous. There is no great danger in cholerick Persons. As to the event, it ends in safety presently, if strength be correspondent; but if that be wasted, death certainly ensues.

Aerius l. 6. c. 4. Saw a young man saved by large Bleeding at the nose.

Ballon l. 2. Reports how a Knight's servant, who had been ill a long time of a double Quartan, died of Catalepsis.

It often turns to an Epilepsie, Apoplexy and other soporous Diseases; and then it is dangerous.

An unaccustomed Flux of the Menstrues or Haemorrhoids supervening is reckoned safe. Except a Cataleptic be timely cured, he will continue torpid.

§. 13. Dietetick Cure.

AS to the way of Living, the Air must be temperate, serene, pure, not cold, thick, cloudy, or full of showres. That Congelation, which is caused by external cold is little of kin to our Disease, unless a Man will with *Charleton* admit a Gorgonick Wind, by which, when it blows, all things that are in its way do congeal and grow hard.

The Meat must be of good juice; all salt, savoury or windy meats, all dried in the smoak, and all that are offensive to the Head, must be avoided. Wine must be small, the Beer well wrought and clear; Meade or Prisan, or an aromattick Decoction are proper. Spirit of Wine and all rich Wine must be avoided.

Sleep and Waking must be moderate; for wherein they exceed mediocrity, they waste the Body, and instead of the animal Spirits, which they dissipate, they fill the Brain with foreign vapors.

Rest and Motion must not exceed bounds; Study and a Sedentary life are naught.

In Excretion and Retention there is a great power to cause a Catalepsis: for the Excrements of the Belly, Urine, Sweat, Menstruous Blood, Child-bed Purgations, Choler, Snor, and the *Lympha* retained, do putrefie, taint the Blood, and so hurt the Spirits.

As to the Passions of the Mind, the case before-mentioned declares what power they have over the animal Spirits. Anger and Fright may easily turn the Animal Spirits out of their seat, and so cause a Catalepsis. Thus too much joy dissipates the Spirits. We have a notable instance here at *New-Hanover*

in my Wife's Grandfather *Daniel de Latre*, Magistrate of the City, who when he saw the Siege raised from this City, was struck dumb with joy, and died immediately. *Tulpius* and *Rondeletius* have observed a *Catalepsis* from Love, all things therefore must be moderate which will last long. *Alex. Bened. l. 1. c. 6.* observed a *Catalepsis* from Worms. And *Grembs Arbor. ruinos. pag. 206.* writes how a *Catalepsis* came from an *Erysipelas* ill cured.

§. 14. Pharmaceutic Cure.

THE Ancients used in the Cure of this Disease things moderately hot and moist. But first of all they give a Clyster. Then they raise the Patient with Shoutings, and painful frictions of the extreme Parts, and give sneezing Medicines for the same end. As there is occasion, they order Spirit of Wine. They anoint the Parts affected with comforting Unguents of Oyl of white Lilies, Chamomil, Elder, Dill, Rue, and Castor. They set much by a Bathe of warm Oyl. When the Patients are come a little to themselves, they prescribe Purgatives, as *Confectio Hamech*, *Diacatholicon*, *Diasena*, *Senna*, Polypody of the Oak, and they endeavour to evacuate the peccant matter by Vomits. Afterwards, Strengtheners, Resolvents, and Correcters of the intemperature that is left behind, *sc. Theriaca Andromachi*, *Diamusc. Latifcans Galeni*, and Conserve of Bugloss roots, compleat the Cure. It is their advice carefully to abstain from four things in this Disease.

§. 15.

THE Chymists do in this as in all soporous Diseases, highly ex-

toll Tincture of Gold, Lique Amber and Mosch, they also mend the Magistery & Oyl of dissolved of each half a Scruple with Syrup of Cinnamon, and *Arcana*, as the Spirit and Sweet of Vitriol.

§. 16.

Wallis does in this an Apoplexy come all manner of Cephalicks, because we have already mentioned them in the Chapter of an Apoplexy, we shall now pass over.

§. 17.

Scribnius says, a *Catalepsis* is difficult to cure, unless it go away of itself. Yet he thinks that the Cure of this Disease may be obtained by Medicines endued with a sharp volatile Salt, such as are all sharp and matrick Plants. We will add a Composition according to his, which is a volatil oyl Salt, certainly an excellent Medicine.

Take of the volatil Salt of Thyme three Ounces, of the Salt of the same two Ounces, distilled Oyl of the same Drachms. Make a Soap of them and digest them in a gentle Bath afterwards sublime them in a Glass Phiol into a volatil Salt.

§. 18.

THE Cartesians endeavour to remove the Obstruction of the *Glandula Pinealis*, and to promote the motion of the animal Spirits. Wherefore they mix animal Spirits of their duty by

Divers Remedies both inward and outward, and they stir up and provoke them to represent divers strong motions to the Mind, that in this manner by briskly moving the *Glandula Pinealis* on the obstructed side, the remainders that lye in the obstructed Pores, may be got out; partly also that being made more ready in the obstructed side to carry the violent motions of the external Senses, they may break their Prison and remove the Obstruction, if not presently, yet at least gradually, and may set the Soul at its ancient liberty. To this end they prescribe all manner of volatill Salts, such as volatill Salt of Harts-horn, of Soor, Spirit of Harts-horn, *Lixir vitæ Matthioli*, *Aqua Anhaltina*, and other cephalick Waters, which strengthen the Brain and the *Glandula Pinealis*, the Seat of the Mind. They highly commend violent motions and frictions of the Body with hot and rough linen Cloths, and rubbing and combing the Hair, and potential Cauterics; they advise the holding of strong smelling things to the Nose, as Castor, and Spirit of Ammoniac, &c.

§. 19.

WE reckon the Cure of this Disease should be directed to check in some measure the impetuous motion of the Spirits into the Muscles, and to help the recourse of them, which is hindred: for *Wedelius in Physiolog. Med. p. m. 57.* holds that there is a circulation of these Spirits, and that it may be hindred. This Recourse is hindred because the passage is stop't, by which the Spirits went out: And this way is obstructed either by a Tartareous, or by a viscid tough Matter, as we

said in the Cause. Therefore all Remedies are proper, which are able to incide or attenuate any viscid Matter, and to evacuate it, as there shall be occasion. Among which things sharp volatill Salts, either aromatick or oleous do excel, which by penetrating do most powerfully attenuate and dissolve all viscidities and obstructions which they meet with. Wherefore we gave Spirit of Sal Ammoniac destilled with Aromaticks, as Cloves and Cinnamon, to our Cataleprick, as a great secret, and with good success; now and then we gave *Sal volatile oleosum Sylvii*, and *Liquor Cornu Cervi Succinatus*. Nor would we neglect Evacuaters in such as are strong. Among others, take this following Receipt.

Take of Conserve of Roses two Drachms, Resin of Jalap ten Grains, *Elcosaccharum feniculi* half a Drachm. With Syrup of Cinnamon make a *Bolus* according to Art. Take it at one time; Or, Take of Extract of black Hellebore, Leaves of Senna each half a Scruple, Oyl of Amber one Grain. With Spirit of Lily Conval. make Pills according to Art.

Here also, as in an Apoplexy, the Cure must be begun with Clysters; because sometimes the Patient can take nothing else.

Vomits also, as there shall be occasion, are good to discharge the Stomach of the filth lying in it. For the sake of young Beginners, Take the Receipt following.

Take of *Tartarum emeticum Mynsichti* three Grains, Salt of Wormwood, Tamarisk each two Grains, Syrup of Raspberries two or three Drachms. Mix them.

I do not at all doubt, but in this Disease a contumacious Obstruction, and a total interception of the animal Spirits may be caused divers ways: For it is well known to curious Anatomists, that there are Valves in the Nerves, which being shut, there is no regress for the animal Spirits, and this is the reason, why I, as well as the great *Sylvius*, think that many cataleptick Persons cannot be recovered. And here volatril Alkalies are far better than fixt ones. For the sake of young Beginners, I shall communicate a Process or two.

Take of Sal Ammoniack purified, Tartar each one Ounce, volatil Salt of Harts-horn three Ounces, Spirit of Urine two Ounces and an half, Rain water destilled four Ounces, Oyl of Cinnamon, Cloves each ten Grains. Mix them and destil them according to Art. Or, Take of rectified Spirit of Wine six Ounces, Oyl of Cinnamon, Thyme, Mace each two Drachms, Fennil half an Ounce. Let them stand mixt for some time, till the Spirits have soaked up the Oyls, then add of the best Spirit of Sal Ammoniack three Ounces. Mix them, & destil them out of a long Philol in Sand. Keep it for Use.

I got great credit by this *Arcanum*. If there be malignity besides, we add Alexetericks and Alexipharmacks. I question not but these following will do good.

Take of Diaphoretick Antimony half a Drachm, volatil Salt of Amber six Grains. Mix them for a Paper at one time. Or,

Take of *Bezoarticum Lunare* six Grains, Cinnabar of Antimony

three Grains, Conserve of Clove-Gilly-flowers each Drachm. Mix them. *Ma Polus. Or,*

Take of *Bezoarticum mineralis* Scruple, volatil Salt of Viper Grains. Mix them, and give them. Take of *Aqua hirund. cum Calce* Water of Betony, Linden Flowers each one Ounce, *Sulphure oleosum Sylvi* one Sa Syrup of Peony six Dra Mix them, and give them. following also will do good. Take of red Coral prepared Drachm, leaf Silver finely d red eight leaves. Mix Make a Powder.

Our Lunar Spirit also is very I am periwaded that Cinnam have altogether as much Virtue them. Some cry up new Elements, which I designedly over, lest I should reveal what committed to me as a Secret, good to anoint the Spine and the Neck with these following.

Take of the fat of Bever, *Bala Apoplecticum* each one Sa destilled Oyl of Rue ten Oyl of Dill by Decoction of Ounce. Mix them. Or, Take of Oyl of *Iris*, of Earthen each two Ounces, Castoreo dered four Scruples. Mix Or, use *Balsamum spass Mynsichti*.

Particular Evacuators, respect the Head, and are called Purgers of the Head, to be neglected, as Errhines, Sternutatories, among which Vitriol put into the Nose with joram Water, is best. But

ician must have a Care, that he do
 not quite eject the remainder of the
 Spirits from the Brain, and so hasten
 the Patient's end. Caps quilted
 with aromack Herbs may be used,
 and Leeches may be set to the
 crown of the Head warm. I must
 commend Bathes as fittest to dis-
 solve tartarous Mucilages. In defect
 of natural we may make artificial
 ones, of which we have treated be-
 fore. Rubbing with warm and rough
 linen, plucking the Hair, and comb-
 ing often answer expectation. Cau-
 teries both potential and actual may
 be used, for they operate powerfull-
 y; and above all we prefer *Moxa*,
 which applied to the crown of the
 Head is a present Remedy in this
 disease, as *Geilfusius junior* in his
 discourse of *Moxa* does prove, nor

only by Experience, but by Reason.
 You may see the rest of the Cepha-
 licks and Antispasmodicks in the
 Chapter of the Apoplexy: For we
 cure this Disease as an Apoplexy;
 and we may well call it an *Apoplexy*
inverse, since in an Apoplexy the
 way is stopt from the Spirits within
 the Brain, to the external Parts,
 upon which all the Limbs flag, like
 Sails without wind; But in a *Cata-*
lepsis the animal Spirits are so de-
 tained in the outer Parts, that the
 Brain flags. And any one that will
 peruse Practitioners, whether old or
 new, will find that this Disease is
 cured with the same sort of Medi-
 cines, that they cure an Apoplexy
 withal. For when the Obstruction is
 removed, the Disease is cured, *Ve-*
lut ruunt subductis testa columnis.

H 3

CHAP.

CHAP. VI.

Of a Vertigo, or Swimming in the Head.§. 1. *Description.*

A *Vertigo* is so called from *vertendo*, or from *vortex*. The Greeks, if it be a simple one, call it *Σκότωμα* and *Δῖν* ὁ τῆς Ὀφθάλμου; but, when it is accompanied with dimness of Sight the Ancients called it *Σκοτόδιν* and *Ἰαλυσ*. It is defined, or rather described, to be a hurt imagination of an apparent turning about of the Head and Objects, sometimes simple, sometimes with dimness of Sight, depending upon the disorderly motion of the Animal Spirits in the Brain. All do unanimously conclude, that here the Imagination is depraved, because the Phantasie and common Sense of those that are taken with this Disease, think that quiet Objects do move; yet, they say, the Judgment is sound, because the Patients understand this their error: And all ascribe this fallacy to the disorder of the Animal Spirits. Therefore the *Vertigo* is a Disease wherein both the Head and all things else seem to turn round; and because the Spirits do not rightly influence the external Parts, the Patient falls down, unless he hold by something. But of this, more in the Cause.

Difference.

A *Vertigo* is either Essential, the Cause is in the Brain, or you may know by the continual affecting of the Parts or by Consent, when the Cause disturbs the Brain, lies in some place, may be, in the Spleen, or Stomach, or some other Part. the Consent of these Parts is caused from a subtil extension of Vessels, rather to be conceived the Mind than expressed in words by reason whereof, one Function certainly does so exactly correspond with another, that upon the whole Part's being hurt, the motions are hurt and in pain; just as a Musical Instrument, when a string is down or broke, the whole harmony is spoiled. And one guesses the same to happen in Nerves and nervous Fibres, excessive loosening, stretching, breaking of which, the whole melody is marred, and abundant Diseases follow.

§. 2. *Subject.*

The general Opinion of Authors is, that both the Ventricle Substance of the Brain are the Subject of this Disease. According

Willis, the animal Spirits, which are very much disturbed, are the immediate Subject of this Disease; and the mediate one is those Parts of the Brain, wherein imagination and common sense reside. And these according to him are the *corpora callosa & striata*. The *Cartesians* blame the porous substance of the Brain as the Part affected. But I take the Disease to lie about the *corpora callosa* and *Striata*.

§. 3. Diagnostick.

AS for the *Diagnosticks*, in a *Vertigo*, either darkness, or some colours, appear in the Eyes of them that have it; sometimes Flies appear; and all things seem to turn round with them, so that they must fall, unless they take hold of something near. Several fall to the ground, and cannot raise themselves, till the Fit be a little over. For it often happens, that they who are taken with this Disease, fall to the ground, without turning their Body, just like them that have often turned themselves round. I saw a vertiginous Person full of gestures in his Fit, he jumped up with his hands stretched out, as if he would catch flies, and at last fell to the ground, and that all the while his Fit lasted, he could not stand upright, but crept along. From once turning round, some suffer as much as others at several times; yea, they that are troubled with this Disease, are in the same condition, if they see another turn round, or a Wheel, or any thing else; or if they look from on high. And if the Disease be Ideopathick, then there has proceeded the Head-ach, or dulness in it, hurting of the smell or taste, tingling of the Ears,

and there is no sign of any other Part being hurt; But if it be by Consent, *viz.* from a depraved mass of Blood, or hurt of the Stomach, Spleen, Womb or *Hypochondria*, then Squeamishness, Heart-burn, and loss of Appetite have proceeded. If it proceed from any other Part of the Body, it will appear from the proper signs, as from the *menfes* being stopt, and a prudent Physician will find it out. This Disease uses often to afflict People at certain times.

§. 4. Cause.

IN the Judgment of the *Antients*, this Disease arises from abundance of hot and spirituous Blood, and they support themselves with this, that a *Vertigo* often takes its rise from acute Diseases and Burning Fevers. And they hold, that sometimes it is caused by crude Humors, which now and then are malignant, and are bred either in the Head or in some Part of the Body below, most usually in the Stomach, Spleen or Womb, because of the communication that these Pores have with the Head. All the Grecians in a manner ascribe the Cause of *Vertigoes* rather to vaporous, halituous & spirituous fumes, than to thick and gross Humors, asserting that accustomed evacuations suppressed, and all Humors in general which send out many Vapours, windy, dry and hot, turbulent and malignant Spirits, may cause a *Vertigo*. For these Vapors and Spirits (say they) by their motion move the Animal Spirit (which is thought to be the vehicle of the Soul) round, or some such disorderly way; so that the man verily thinks that is done without

him, which is done within him, and the judgment of the Imagination is perverted, which makes a Man think he turns round, and sometimes that he is falling. They will have the said Vapors to roul round, just as flame or smoak roul round an Oven, while they have no vent. The Schools say also, That this Disease arises from the hot intemperature of the Brain it self, because when it is hot, it may draw many Vapors, and put the Humors in a heat or ferment.

§. 5.

Paracelsus and his Followers say little of the Nature and Causes of this Disease. Yet many of them fly to a Mercurial principle, some admit also of a Saline one. **Quercetan** and others say, That Vapors and Exhalations proceed from resinous, tartareous and sulphureous Humors contained in the Stomach and other Parts, or rather from the unctuous and sulphureous substance of the Blood.

§. 6.

Helmont in a *Vertigo* blames a turning or whirling faculty proceeding from the Stomach. For according to him, eating of some certain Meats has caused a *Vertigo* (as his Writings testifie) and particularly towards Evening, that is, before they were yet concocted. He says, we may believe him, that every *Vertigo* creeps from below, without Vapor or Fume, and that the Head is governed by the Stomach. Also *Cap. 9. Tex. 86. de Lithiasi*, he says, a *Vertigo* is caused by an inebriative Poison, such as is Smoak of Tabaco.

§. 7.

Willis thinks the Cause of this Disease a perturbation of the Animal Spirits, raised by heterogeneous particles and troublesome Spirits, lye either in the mass of Blood in other Humors. For the ginous Particles insinuating themselves into the midst of the darken the Spirits. Things remotely do very much contribute to the breeding of this Disease the way of Living, all cacochymic Blood, the Scurvy, long and violent Fevers, which cause a distension of Blood, and easily afflict the part of the Spirits.

§. 8.

The *Sylbians* in this Disease blame the Animal Spirits, disturbed more or less, which confusedly and vertiginously affect the Eyes and Organs of Touch.

§. 9.

The *Cartesians* say, the Disease is a Disease, in which all the near seem to be carried round, the depraved, that is, circulation of the Animal Spirits, that, because the Humors in the Blood are so exagitated, the roots of the Nerves are affected, and so one pressing another, the sensible Bodies seem to turn round. And this compression they say comes from the badness and distension of Blood; because Phlegmatic persons complain most of this Disease by reason of the compression of the Pores of the Brain, upon the Animal Spirits cannot pass the Brain and its Pores in a

line, but rebounding one upon another, wheel round, and move circularly. As *Antonius le Grand*, p. 8. In *Philos. Art.* 22. § 12. Discourses charge of this among other Matters

§. 10.

WE think that a *Vertigo* is a little Epilepsie: For aiginous, caducous *Vertigo* is in young Men a fore-runner of the Heretean Disease, as it is in old Men an Apoplexy. It often happens that a malignant Character is impressed upon the mass of Blood and Animal Spirits, through the fault of some private part, whereupon the Spirits betake themselves to *Corpora callosa & Striata*, and being disorderly sent out thence, it cannot otherwise be, but that they must whirl round. And having found that way, the rest of the Passages and Ways are forsaken, and a *Vertigo* is caused; which is the more probable, because upon a man's turning himself often round, the whirling round of the Spirits continues a good while after he has ceased turning, because the Spirits continue their former course. The more Cause of the Circumgyration is this, When foreign and hard Particles being carried to the Brain yet stop up the right passages, but the optick Nerves in the Brain, they do still keep their way by-way, and cause this disturbance. And this may serve for a Reason, That in Drunkenness a *Vertigo* proceeds from too great effluence of Blood, in that by the spumation of the subtil Parts, and separating of the grosser, some of which are carried to the passages of the Brain, (for we see, how in all fermentation of Wine or Beer, sulphureous, scæulent and tartareous

Parts are cast out with the subtil) which terrestrious and crude Parts obstruct the Pores of the Brain, so that the Spirits cannot proceed and irradiate freely, whereupon they rebound, and whirl round, just as when one Wind meets with another, or is stoppt, a Whirlwind is caused. Sometimes this Disease arises from a hot Cause, but it is by accident, inasmuch as it gives brisker motion to the Blood (like Wine in Drunkenness) and so more Blood is carried to the Head, and more Spirits bred, than can conveniently be distributed by the Nerves, which makes them turn round and cause this Disease. As I am writing this, a new Reason comes into my Head, which is this, Because, in Scorbutick Fevers, in Dyscrasies of the Blood and Humors, when men abound with divers heterogeneous Particles, as well sulphureous as saline, a *Vertigo* is occasioned, where any one may plainly see that the way is obstructed by these Particles. But as for that *Vertigo*, which is caused by Consent, especially of the Stomach (for many upon fasting are troubled with this Disease) the reason of that is, not because sharp Vapors get up into the Head and darken it, (which error of the Ancients has long since been exploded) but rather because some sharp, pungent, & aculeate matter lodging in an empty Stomach, when it is idle and has nothing else to do, causes a vellication and shrinking of the nervous fibres of the Stomach, which vellication or shrinking, as all other spasmodick motions are, is communicated to the Brain. Where, upon the motion of these Fibres, the Animal Spirits are disturbed, the motion of the Blood is quickned, and (if I may

so

so say) a despumation of the vitious Particles is made, whence naturally ensues the Obstruction of the Optick Nerves; and when they are obstructed, the Spirits move disorderly, which is the rise of this Disease. It arises also from sailing in a Ship, riding in a Coach, looking from on high, and such like things. A caliginous *Vertigo* seems to have its original from defect of Animal Spirits, and their depraved motion; because enough of Spirits cannot be found to fill the optick Nerve and the Eye, which a very little will usually do: Hence it is apparent, why People commonly have a *Vertigo*, before they fall into a Swoon.

§. II. *Prognostick.*

WE will now pass, from the consideration of the Causes, to the Prognostick. A *Vertigo*, if it last long, threatens either an Apoplexy, Falling-Sickness, Madness, or some spasmodick Disease; wherefore so pernicious and daring an Enemy must not be slighted. The generality of Practitioners, according to their great observation, do hold, That they who in a *Vertigo* see green or purple colours, are most enclined to the Falling-Sickness; they who see red, to Madness; and they who see black, to an Apoplexy.

But every *Vertigo*, while it is new, is usually without danger, and easie to be cured, as well as other Diseases in the beginning: And so is that which comes from Drunkenness either with Wine or Tobacco. But, not to be too tedious, let the curious Reader consult *Hippocrates*, in whose Store-house there lies much in a little room.

§. 12. *Dietetic*

NOW we will proceed to the next part of the Cure, which consists in the Six Non-naturals, the true Sons of *Aesculapius* them.

Make choice of a serene, pure and clear Air; whence we easily conclude, that an airy, cloudy, cold, and corrupt Air must be avoided. Who is that finds not the state of his mind as wavering as the Wind? When the North-east Wind blows, the Air is cleared of Clouds, and the noxious Humors in the body are wasted, and cloudiness of the mind dispelled? But, on the contrary, if the opposite South-west Wind blow, how greatly does it damnify mens Health?

Eat *Meat* of a good juicy and easie of digestion, not without salt, sharp. Avoid therefore a diet of Pulse, Beans, Pease, and such like. Eating in the Morning, especially a Toast dipt in some rich Wine or Sack, (which *Helmont* himselveth when he was vertiginous) is good to soak up that sharp matter which often vellicates the Fibres of the Stomach, and causes this Disease. For here we must have a great care of eating too little, as much. Moderation is best.

Let the *Drink* be small, and mixt with Water, or Spaw. You must not therefore drink strong Beer, that is not well brewed, and too full of Hops; nor strong Wine, because it is the fermentation of the Blood, thereby sends many crude Particles to the Brain.

A little *Exercise* is good; it is rather proper for the Head.

Moderate Sleep is proper ; but Watching is naught.

The Excrements of the Belly must be promoted every day, either by Art or Nature. The case is the same in the usual Fluxes of the Hemorrhoids, &c.

The Patient must allow of no perturbations of Mind, such as Fear, Sorrow, &c. because they do much prejudice Mens Health.

3. Pharmaceutic Cure.

Now let us pass to the Pharmaceutic Cure. The Ancients counted this Disease with Evacuations ; and they used these that follow. Syrup of Roses made with many Infusions, *Diaprunum solutum*, *Diacatholicon*, *Hiera picra*, *Colocynthis*, *Pilula cochis, aurea, rubica*, *Mastichina*, sine quibus esse non potest, de 5 generibus myrobalanorum. You would have Simples, Take Marshmallows, Rhubarb, Manna, Senna, Poppy, Dodder of Thyme and Clove, of which you may make several Medicines. When they think the Disease proceeds from the Stomach, they use the common Vomits, which every one knows. Then they fly to Evacuations and Diverters. If the Disease proceeds from Blood or Humors, they bleed in the Cerebral Vein, and repeat bleeding several times. Among Revellents they use Clysters, Frictions of the Head with a rough linen Cloth, and Cupping glasses applied to the more remote Parts. They bleed the Hemorrhoid Veins, promote the menses ; nor do they neglect Sneezing-Powders, Gargarisms, Phlegmatisms and Blistering with Yeast and Vinegar. They highly value an Issue on the top of the Head. They extol Errhines of

Juice of Sowbread, or Pimpernel thrust out of the Hand. These things premised, they use things to stop the turbulent motion of the Spirits, such as Syrup of Quinces, Pomegranates, Sugar of Roses, Juice of Barberries, *Diacydonium*, distilled Water of Lettuce, Violets, Plantain, &c. In a hot Cause they say it is good to smell to Camphore, Roses, Vinegar, Oyl of Roses, &c. They frequently use washing the Head with Oyl of Roses and Vinegar, and Embrocations and Bathings. Their Medicines to strengthen and dissolve the remainders, are Syrup of Apples, *de Stachade*, Conserve of Borage, Bugloss, Sugar of Roses, *Diatragacanthum frigidum*, *Diatrion santaloni*, *Diamoschu dulce*, Decoctions of Leaves of Betony, Mint, Rosemary, Sage, *Stachas*, Centaury the less, Galangal, Cinnamon, Seeds of Fennil, Anise, &c. They commend smelling to *Nigella*, Majorane, Castor, and such like things. And, to comprehend all in short, First of all they give a Clyster ; then bleed, if nothing hinder ; then perfectly purge off the Humors that are peccant, and that breed peccant Vapors ; afterwards they divert the violence of the Vapors, by Frictions, Cupping-glasses, and Scarifications. In the beginning of the Disease they order Astringents, to hinder the ascent of Vapors to the Head, which they blame so much. For instance,

Take of Rose Water three Ounces, Vinegar two Ounces. Mix them for an Epithem.

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Disease depend upon the Womb, they use *Castor* and other Uterines. When the swift turning or motion of things causes it, they must not look on such things. What Remedy must be used, when it comes from fasting, we have told you before. If the Disease have its rise from the suppression of any usual Evacuation, it must be promoted.

§. 14.

WE have heard the Judgment of an innumerable Company of the ancient Practitioners, now we proceed to the *Paracelsists*, who observe the same Method of Cure here that they do in the Epilepsy, of which we shall Treat in the following Chapter. Therefore in this Place we will only lightly touch upon such Things as are proper to this Disease. One of their chief Remedies is the Sulphur of Vitriol, to which some of them affirm the Tincture of *Luna* to be equivalent in Virtue, and this they defend with Might and Main. *Crollius* a Follower of *Paracelsus*, commends his Master's *Elixir Proprietatis*, and gives it in Water of Peony or Borrag. Others give to drink with good Success in Water of the Flowers Lily of the Vallies, Salt of Amber and Pearls.

Amongst external Things they reckon the Apoplectick Balsam of Rue, Amber, &c. Also some almost ridiculously write, That the Fat of Deers and Serpents rub'd on the Temples, has a peculiar Virtue from the Signature or Character of curing this Distemper; because those Creatures climbing up high Rocks and Precipices are never affected with it. Others as simply affirm the Quintessence

of a Stork to be likewise good.

§. 15.

IN the *Vertigo*, and in all Distempers of the Head, highly extols Vomitories, in like manner the volaril Salts, sweet Stomachicks and Cephalicks as of Sage, Marjoram, Rose-Clove-Gilly-Flowers, &c. Thus this Author cur'd himself taking a Vomitory, and drank little Wine with his Meat, by which his *Vertigo* immediately ceased; and after he had several Times suffered a Relapse, in the End, by often taking phur of Vitriol, perfectly cured

§. 16.

WILLIS's Therapeutic Cure in this Distemper as follows. In the first place the dispersing all the Clouds of the Brain, and composing the orders of the Animal Spirit, commends all Cephalicks, as Amber, Man's Skulls, Roots of Peony, Misleroe, Peacocks Dung, the divers Prescriptions of which we are not minded to set here, but rather to refer to the Author himself. Before that the Brain may be freed from all the Inundations of morbid Matter, Venesection is very good, and often to be followed by a gentle Purge. He advises an Issue in the Leg or Arm, so to open the Hemorrhoids. He orders the Neck and fore-Part of the Head to be washed every Morning in clother, and to be rubb'd with Cloth. To take away

§. 18.

According to the Cartesians, Care must be taken in the very Fit, how the Animal Spirits may be reduced into their former Order, which they assert may be done by several Spirituous Things which unlock the obstructed Passage, and likewise by Cephalic and Aromatic Balsams. But if the Distemper arise from a Plethory, they order Venesection, and prescribe other aqueous Things. But if the Mischief has its Original from a foul Stomach (which ceases by eating) as to Pharmacy, they call to their Assistance Vomitories and Medicines of Quinces, no less than they do Meats that are somewhat hard, as a Crust of Bread, or the like; for hereby that sharp Humor which lurks in the Stomach, and some Way or other boils and ferments of it self, and like Daggers, Needles, Lances, or Razors cuts and pricks the little Fibres of the Stomach, is corrected, and those sharp Particles are obtunded by being rubb'd and beat against by those Medicaments and Aliments. Out of the Fit, that the morbid Matter may be prepared, they use divers Digestives and Alteratives, after that either by Vomitories or other Catharticks they throw forth the peccant Particles.

§. 19.

Now we have a Mind to insinuate our own Way of Cure. We are not arguing here either for Galen, Paracelsus, Helmont, Willis, Sylvius or the Cartesians, but only for the Truth; for according to that trite Saying; *We Love Plato, we love Socrates, but Truth is dearer to us than*

§. 17.

The Method of the famous Syllivius in curing this Distemper thus. His first Endeavour is, to reduce into a tranquil and quiet state, the Animal Spirits disorderly stirred up and down, and representing to him that is vertiginous, several Objects as turning round, which End he orders Anodynes, to better Purpose Narcoticks, in a less Quantity. *Ex. gr.*

Take of the Water of the Flowers of the Linden Tree two Ounces and an half, Antiparalitic or Antiepileptic Water one Ounce, *Laudanum opiatum* three Grains, Syrup of French Lavender one Ounce. Mix them, and let the Sick Person take a Spoonful or two till the Vertigo be corrected.

Nor does our Author despise volatile Salts and Medicines of Castor, also Vescicatories and Vomitories, as we have it from his own Mouth,

than both. Now this is principally to be endeavour'd, That the Animal Spirits whirling round, be reduced again to their pristine Condition. If therefore the Enemy make an Invasion armed with Swords, Spears, Lances, and other Sharp Weapons, and begins to show himself openly in the Stomach, he must be engaged with Vomits and altering *Alkali's*, and in this Case volatil *Alkali's* have much the Preference of the fixt, as being able both to absorb the Acid, and obtund its Points. Hence it is that *Liquor Cornu Cervi Succinatus*, and that excellent Remedy of *Schefer*, *Balsamus nervinus*, are so beneficial to those that are troubled with a *Vertigo*. All Spirituous Things are good in this Disease, because they dull and obtund the conglomerated Particles by hard rubbing against them. Furthermore, all Epileptic Waters are available, and other saline volatil Liquors, especially if they be sharpened by Camphore, and temper'd with the Essence of *Opium*, as Occasion requires: For if *Opium* and Camphore be mixt together, they have a singular Virtue in hindring a future and imminent *Vertigo*. And hence it is that the ingenious *Craan* magnifies his camphorated *Laudanum*, wherewith in Fevers and many other Diseases he does Wonders. Let this be a Prescript for Beginners.

Take of Epileptic Water an Ounce and an half, Flowers of the Linden Tree two Ounces, Spirit of a Woman's Secundine one Drachm, *Eleosaccharum* of Amber half a Drachm, *Laudanum* camphorated four Grains, Syrup

of Betony an Ounce. Mix and take it by Spoonfuls. Take of Water of Lily of the lies, drawn off Wine one Spirit of the same a Drachm and a half, the Spirituous Matter of Chervil two Ounces, cocks Dung one Ounce, Syrup of Chervil a Drachm, *Syrup* of Betony one Ounce. Mix and give it by Spoonfuls.

The following *Scotomata* Cure is excellent.

Take of the Flowers of Lily of the Valley, of half an Ounce, Rosemary Drachms, Sage, Betony, Tree of each two Drachms, them be digested in twelve Ounces of Spirit of Man's Seed, and be digested with its Salt.

Amongst fixt *Alkali's* we have all earthy Things, as Chalk, Coral, Amber, Crabs Eyes, of *Mars*, Sulphur of Vitriol, absorbing Powder of our experienc'd Colleague Water, and also this that follows, very well deserves to be preferred before all other Remedies in this Distemper.

Take of Crabs Eyes finely dred, Vitriol of *Mars*, *Diarrhodon Abbatii*, *Arm* *rosatum* of each one Drachm, *Laudanum camphoratum* Grains. Mix them, and make a Powder. The Dose is half a Scruple to half a Drachm. Or, This following Powder. Take of the Powder of the Head of *Doronicum* two Drachms, cephalic Specific a Drachm, and a half. Mix them. The

is a Scruple at Morning, Noon and Night. Or, Take of Essence of Chervil, Flowers of Rosemary of each two Drachms. the Dose is twenty Drops. Or, Take of the Powder of the Root of *Doronicum* two Drachms. With a sufficient Quantity of Sugar make round Lozenges. Or, Take of the Root of Florentine Orrice, *Doronicum* of each one Drachm, Flowers of Lavender, Citron, Cardamoms, Cubebs of each two Scruples. With a sufficient Quantity of Sugar make Tablets.

Opoleptic Balsam mixt with an Ounce of Marjoram is a great Preervative. But I am unwilling to spend any more Time in transcribing and raking together these Remedies. That excellent Remedy, volatril Spirit of Vitriol, given the Quantity of ten Drops or more every Morning, is good for the Vertigo. Also Nitrous and Iron Waters are of great Use, because they dilute the Blood. We likewise prescribe Clysters and other Catharticks, as *Pil. de Succo Jalap.* with some Grains of Magist. of Jalap, or Wine medicated with Specificks.

Now by Experience, that the Essence of Chervil took in Broth, is very efficacious in this Distemper. Also Water thrice rectified may be used often. And likewise a Water distilled out of the Brains of a Cow and a Calf, is found to be very efficacious.

The Distemper arise from several Reliques, and a Scorbutic Tendency of the Blood, these are to be corrected and cured by divers Antiscorbuticks, which we discourse more at

large elsewhere. But in the first place Venesection, in this Case, should be often repeated. If the Mischief arise from Obstruction of the *Menses* or *Hæmorrhoids*, they are to be provoked; If from Poison, then we must encounter it either with Vomitories or Alexipharmacks; If from sailing in a Ship, riding on Horse-back, looking down from an high Place, these are all to be removed, and a Vomit to be given. Thus the honourable Boyle in his Experiments concerning Colours, says, he successfully cured a *Vertigo* got by being tosed on the Sea, by an Emetic Potion; as likewise did *Segetus*, in *Ephem. Germ. An. 3.* If it proceed from being drunk, it will go off on its own accord, but for the future let the Sick Person beware of such Excess. The following little Bag is to be held to the Nose.

Take of the Powder of the Root of *Doronicum*, Florentine Orrice, of the Flowers of Lavender, *Lignum Rhodium* of each an equal Quantity, Spirit of Lily of the Vallies one Scruple. Mix them, and make a little Bag.

Vesicatories, Frictions, Baths, Arteriotomy, Cupping-Glasses, Leeches, Scarrification, and other Things of this Nature are not to be neglected. When the Fit is violent and comes often, and does not give Way to usual Remedies, that the Patient may not be in Danger of his Life, we principally commend the Infusion of the Liquors of volatril Salts, and such other Things as the Case requires, according to the Advice of the worthy *Ettmullerus*, especially if it comes from a malignant Impression made

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on the Spirits and Mass of Blood. We have often known an actual Cautery, viz. burning the Top of the Head with *Moxa*, to have had good Success in a desperate Case. To the Nostrils and Top of the Head you must apply Epileptic Waters and Balsams; as Balsam of Rue, or the Apoleptic of Amber. Also the Top of the Head is to be anointed with several Oils. And you may externally in the Fit use this Receipt which follows.

Take of Water of Lily of
lies half an Ounce, Spirit
same one Drachm. Mix
and give it.

But seeing we are to treat
largely of these in the following
Chapter, we neither have time
nor is it convenient for us to
any longer upon them, lest
guilty of a tiresome Repetition
and of forestalling the
Reader.

CHAP. IX.

Of an Epilepsy.

§. I.

Names and Definition.

TO be brief about the Names of an Epilepsy, we call it in English, *The Falling Sickness*; in Latin, *Morbus Caducus*, *Sacomitialis*, *Lunaris*, *Sonticus*, *truleus* and *Herculanus*. And it is commonly defined to be, *A Convulsive Motion of all the Parts of the Body, especially of the Hands and Feet; perpetual, but coming at certain Intervals of time, with the hurt of the Senses both internal and external.*

This Disease has its name from the urgent Symptom, which troubles a man most in this Disease; on whomsoever this Disease exercises its cruelty, it takes them on sudden, and casts them down and renders them flat, as if they were under-struck, and commonly deprives them of all Sense and Motion.

There is also a trepidation of the Nerves, all the Parts quiver with a secret violence, the Limbs are contracted and drawn aside, there is a gnashing of the Teeth, and frothing at the Mouth, and that usually, when the Fit is at an end: there is oftentimes a shaking of the Head, and a terrible falling of the Body to the ground, sometimes

the Arms and Legs, as also the Neck and Back are stiff, or turned this way and that, with various distortions.

§. 2. *The Difference.*

THE Differences taken from the Causes, are by the common consent of Authors reckoned two. For either; (1.) It is taken from the place, when the Brain is affected Idiopathically, or is ill in itself, which is, when the Fountain of the Disease has its place there; or, (2.) It is caused by the consent of other Parts both internal and external, to wit, of an ill affected Stomach, of which there are several Causes instanced in the German *Ephemerides*, or of the Womb, Spleen, Intestines, Mesentery, Genitals, &c. Of the external, as of Ulcers, Wounds, Concussions, Inflammations, and Swellings. A *Virtuoso* observed how this Disease did thus arise from a hurt in the great Toe; so that a little spark kindled a great flame, and caused a true Earthquake in the Microcosm. Therefore the elastick Particles may well be blamed, which are perceived to ascend from these Parts, when they are pained, like a cool Air or Vapour, whereupon

man drops down in a sudden Convulsion.

A Sign of the Head's being primarily affected, is, when the Eyes are blinded and caliginous, the Head akes, with a heaviness and dulness of Sense and Mind, the Patients are troubled with turbulent Dreams, are taken suddenly, and, as if they had seen a *Gorgon's Head*, are struck dead in the twinkling of an eye. But when the Disease proceeds from the mouth of the Stomach, it may be known by this, that the *Fit* does invade them most, who have fasted a long time; and before the Disease seizes them, they find a Squeamishness, Gnawing, Decay of Appetite, Vomiting, Hicough, and the Heart-burn.

But if the Disease take its rise from other Parts, suppose from the Spleen or Womb, you will find the proper Signs of each Part as it is affected, and so it will be, if the Disease be lodged about the Bladder or Liver. Thus, if it come from the Womb, Pain will be felt about that place, also Palpitation of the Heart, Difficulty of Breathing, &c. will show it. There is a sort of Epilepsy also, that arises from a strange, exotick ferment, lurking in the Tube of some Part or other, and communicated to the Brain, as in Anger, Burning Fevers, Phrenzy, Small Pox: For when ever the least effervescence is raised in subjects, disposed to this Disease; then it may very easily so happen, that a Fit of it may arise from the transmission of a depraved ferment to the Brain, which puts all the Parts of the Head (if I may so say) into a panick fear, and gives the Alarm: for are there not manifest conveyances, namely the Nerves, by which the taint of the Poison

creeps into the Brain, and mingles with the Animal Spirits? But if the Spleen be in fault, by reason of a corrupted or vitiated ferment, or its corruption and Putrefaction, it produces pains, heat and swellings in the *Hypochondrium*; sometimes Scurvy, Cachexy, Melancholy, &c. are observed to accompany it. To my grief, I found it in the late Illustrious Prince, whose Death was much lamented. Must we forget Children (concerning the Original of this Disease, whereof, I shall take another opportunity to discourse) at the time of their Teething, which arises from the irritation or vellication of the third and sixth Pairs of Conjugation of Nerves, and the Inflammation of the Gums, as, when they have Worms in their Mouths, are also troubled with this Disease, these being bred by the immoderate and voracious eating of crude and bad Milk; which may be easily known, because when they are taken over, they vomit Phlegm and curdled Milk; a thing to be lamented, that the poor Infants must suffer from the iniquity of their Mothers, when she has omitted to nurse them. Nor can it be denied, if we were to examine that case narrowly, when Children die of Fits, that it proceeds from a certain corruption of the Mother's Milk, which is depraved and grows sour in the Child's Stomach; which is manifest plain enough by the vomiting of curdled Milk, and the swelling of the Belly grown portaceous and knotty by an acid, which exceeds the contraction of the Muscles, and the elastick Particles are evacuated to the original Nerves, whence come the convulsive Motions.

3. Part affected.

we say the Part affected is the Brain with its whole Substance, so they think that the Part affected is contained within Brain. Others are absolutely of Opinion, That it is only the Vessels of the Brain; some, that it is the Passages thereof. Some Physicians will have it the middle of the Brain; and several the outer, cortical Part of it. There are some that make the Fibres and Tendons for the primary Subject; others, who make it wide of the mark, fly to an occult and specifick quality, the Quality of Ignorance; others to a Cause, or something Divine. Of these two last Opinions, he that chooses one, makes only *Diomedes* and *Ulysses*'s exchange; and one may very well say of this Case, what *Proverb* says of Women: *You can choose a good one; one indeed is better than another.* So *Quercetan* blames the Heart without Fault. Some do hold, That the Brain is the Part principally affected. Many hold, the *Glandula Pituitaria* and the *Plexus Choroïdes*. Some few conjecture that the *Meninges* is the subject of this Disease. The *Helmontians* blame the Irradiation of the Soul, that comes from the Stomach, and affects the Brain.

In my opinion they come to the truth, who take the Brain and Nerves for the primary Subject, which is proved, First, by the Authority, who *L. 3. de loc. affect.* says, *It is consentaneous, that this Disease should be in the Brain*, if I may be allowed to place his Authority among Phy-

sicians, and sure I may, since, Secondly, we have most pregnant Reasons to second it, namely, because in this Disease we find the principal Functions to be hurt: for the *Cerebellum* is principally affected, where the Spirits chiefly do their Offices, and to which the Spinal Marrow is immediately joyned, then this, as the most sensible Part, being irritated, the whole Brain is shaken, together with the Nerves and the whole Body, and both the principal and inferior Functions cease, a preternatural motion only remaining. To confirm which Opinion, I have an instance of a Soldier, who, as I was writing this, was wounded by his Comrade; for he received a Cut in his Skull, which hurt the *Meninges*, and shook his Brain, and he was often taken with an Epilepsy and a Vomiting till he died. Nor do we exclude the *dura Mater*, or any other *Meninges* of the Brain, which line the sides of the Ventricles; nay, nor the more remote Membranes, that are without the Skull, by whose consent the Brain may be affected. Dr. *Willis* in his *Pathologia cerebri*, a Book that might be a grace to *Apollo's* Library, accuses the peccant and depraved motion of the Animal Spirits, as is apparent from what follows, when we shall discourse of the Cause. And whereas he acknowledges the Animal Spirits for the Subject, yet he may easily be reconciled to our Opinion; for the solid membranous Parts are the Tongues and Interpreters of the Humors and Spirits in our Brain; and it is evident to sense, that convulsive Motions are made by means of the solid Parts; wherefore I do not deny that the Animal Spirits offend in motion, as appears from

his own very words, That an Epilepsy can never be, unless the Brain it self, or some Membrane of it, provoked by some irritation, perceive a spasmodic Corrugation and Crispation by means of the Membranes. There happened a strange Case to a Country-fellow in this Neighbourhood, who had his Skull so wounded and broken with a Huntsman's Knife, that some fragments of the *Cranium* were struck into the substance of the Brain, which the Surgeon successfully extracted by Trepanning, Eighteen days after the Wound was given, and (which is wonderful) though both the *Dura* and *Pia mater* were hurt, yet the Patient in a manner found no convulsive motions at all. I am here at a stand, what the reason should be, why an Epilepsy took not this man, which is an inseparable accident of such Persons? This, if my conjecture fail me not, was the reason, because these Membranes were cut at one blow; besides, the Animal Spirits were observed not to be very explosive in this subject; yet the Patient was not without a mist in his Eyes and a *Vertigo*, which are not wrong called, the Dawnings of this Disease.

§. 4. Signs.

NOW we will search the Signs, whereby we may know this Lion, as by his footsteps. They that are troubled with this Disease, feel a cold Air creep up along the hind-part of the Head to the crown, as a fore-runner of it; the Belly and *Præcordia* swell with wind, often rumble, some have their Faces pale first, others red; a disordered motion of the Tongue, aking and heat-

iness of the Head, forgetfulness, and sickleness of the Stomach tend the Patients. Some darknes come over their Eyes, others on the countenance Flashes, Sparks, Flies and other such things. Then according to that of

*Fertur equis auriga, nec
habenas.*

The principal and least sign of a strong Epilepsy, is a Froth or foam about the mouth, just as if it were bedaubed with melted lees of Oyl; I say of a strong Epilepsy, in a less degree of this Froth appears, as being not so thick, but to strain out such an quantity. Then when the Patient is in a loss of his Senses, a sudden falling, or a violent concussion of the whole Body, before they fall, they run, and the other, as, to motion, I observed in one Epileptick; then the whole Body is drawn away, and is rattled with divers motions, and thump and strike the ground with their Head and Legs; their Eyes also roll, sometimes their cheeks to their Breast, sometimes to their Back; there is often an involuntary effusion of Seed, then of the Ordure and Urine, is, when these Muscles are relaxed and loosened, by the Animal Spirits, and not sufficiently intent on their Functions, besides, the Throat, and sometimes the Voice does oftentimes come out of the Mouth of People that are strangled. Patients are almost with-

of the interception of the Spirits ; they often loll out tongues like a thirsty Dog, in danger of biting it with Teeth. Others have their so close set, that it is more's mercy, than humane help, they are not cloaked. The when they come to themselves various and various, they rise on their own strength, but as weary soldiers after a Battel ; a sobbath and Head-ach are fore- of their coming out of

§. 5. Cause.

manner of our Method tells us, we must inquire diligently the Causes. The Divine Hippocrates and his disciple Galen have the Cause of this Disease Phlegmatick and Melancholick humors raising a disturbance in the Brain. Therefore according to the Judgments and Hypothesis, an Epilepsy is caused by abundance of the cholick and Phlegmatick humors, nor do they exclude a bilious because that sort of Humor has Power in it to irritate the Brain and consequently to produce Epilepsy. And they believe, from all these forementioned humors, corrupt, poisonous and acrid Vapors do arise, which obstructions in the Passages of the Brain, and by these means the motion of the Spirits is stopped, before the Brain and Principle Nerves, that it may expel which struggles with it, does affect it self, and forces out which is hurtful, be it a Vapor or

§. 6.

THE Chymists take another way, and among them the Paracelsists do in this Disease blame a volatil acid Spirit, as their Lord and Master does, and they are tooth and nail for this Opinion. Sometimes he calls this Disease an acid Spirit, wherefore, Dictator like, he ranks it in the Catalogue of Mercurial Diseases ; sometimes he thinks, that this Disease is astral, spiritual, invisible, from connate Principles, and especially from their tinctures and impressions exalted. The same Author in another place affirms, That the matter of an Epilepsy is a stupefactive biting Sulphur, residing in the Microcosm, which hurts the Brain like smook, when an Ebullition is raised by the Stars.

§. 7.

OUR Author dissents from both, and seems to approach nearer the shrine of Truth, through the thickets of jarring Opinions and Reasons on either hand ; that is, he makes the Cause of the Mischief to consist in heterogeneous and explosive Nitro-sulphureous Particles, which being kindled like Gun-Powder, are communicated to the Brain by the Animal Spirits, whence proceed these convulsive motions ; for the Animal Spirits do start out too imperuously, and like a head-strong Horse, when spurred where break their Bridle, and draw fast tear the containing Parts, like a Charriot behind them in a perverst and outrageous motion.

§. 8.

Helmont, who often Paracelsizes; ascribes the rise of this Disease to the Stomach, and thinks it arises from the lower Parts, by which *Archans* of ours he reckons the Spirits are made waspish, whence proceeds the Epilepsy, in which often an insensitive, and (as he says) a mad Poison, that afflicts for a time, resides about the *Præcordia*.

§. 9.

Tachenius, who has gained a good repute among Physicians, blames the Acid, and he makes the thing more probable and likely, because these convulsive Motions are best cured by volatil Alcalies: And he has this farther to say, That Gripes and æruginous Excrements are often attended with an Epilepsy, especially in Children.

§. 10.

Sylvius, who treads in *Helmont's* footsteps, thinks that the true and adequate Cause of all Epilepsies is an acid volatil Spirit, in whatever Part it be bred and gathered, and carried thence to the Brain, which joyned with the Animal Spirits, severs and moves them impetuously, and further, from a kindly, continual, and orderly motion, subject to the empire of the ^{se}so, puts them into an impetuous and violent one. And he supports this Opinion, for that the Animal Spirits are of oily, sharp and watry Parts, which easily take fire, and being kindled all at once, may rush

upon the nervous System, and shake it.

§. 11.

Cartes, That subtil Spirits who seems to have per-
Eyes of the old Philosophers, a depraved Blood, with a obstruction in the solid Parts, therefore in the four quarters, which, after what manner ever they are applied to various kind, exert their power in the hooked Particles, being once fastened to the Fibres, cannot so easily be removed; thence these nervous Motions and the Epilepsy arise, and thus he seeks the only in the figure of the The Spirits (as he says) pass through the *Glandula* contribute most to volubility, for because the *Glandula* very many Arteries under every hand, since at every many Spirits are cast out against the *Glandula*, and also has its Pores, therefore of them pass through the which properly contribute voluntary determination of Spirits, because since the receives some determination the Soul, the Pores of the also require another aspect before the Spirits, which through its Pores, are directed to another Part of the *Brain* when the Spirits placed *in* (or in a Poise) in the cles, are thrust out by the they are determined to But in this Disease the determination of the Spirits away, because such about Spirits fly violently in

and pass through the Pores of the Glandula, that the Soul cannot hinder these Motions, but plays the Spectator in the body, and stands amazed and sed.

§. 12.

If I might be *Palæmon*, would either say,

nostrum inter vos tantas componere lites:

(the first intimation of which I owe to *Willis*) I should say that the Cause laid in a bad humor or sort of Serum, which by vitro-sulphureous or bilious Particles, joining themselves in company with the Animal Spirits, by corroding, irritating, and enraging the Nerves, makes them, whether they be or no, part asunder, & like fired Powder, *Aurum fulminans*, or *vis tonitrualis*, or like a glass by exerting its elastick Faculty, exert violently upon the Nerves, and to the Membranes and Brain itself; and hereupon the Animal Spirits, being made rebellious, become the Authors of so many horrible Symptoms, which tumultuary motion of the Animal Spirits *willis* rightly called *Explosive*: For it is nothing else that produces an Epilepsy, but the violent and imminent Explosion of some Particles, that reside in the Blood and Animal Spirits, whence proceeds that great provocation of the Membranes of the Brain, and that disturbance or violent commotion of the Animal Spirits. For these heterogeneous or elastick Particles being next with the Animal Spirits, are moved impetuously, whereby the

Animal Spirits being violently dilated, and moved disorderly, acquire such a determination, and so open the Pores of the Brain that they are discharged every way upon the Nerves. And that all these things may be done without sense or appetite, may easily be proved by Hydraulick and Pneumatick Engines, and thereby the Cause of this very bad Disease may be explained. For the Cause of an Epilepsy does not necessarily lie in the Head, but may arise somewhere-else from a solid Part. Thus I have known it arise from a suppression of the *Menstrua*; wherefore it is probable that this Disease may be produced in the Womb or Testicles of a Woman, by corrupt Blood or Seed; for when the Blood is thicker than it should be, it causes Obstructions about the Womb, because when the Humors and Blood sticking there do stagnate, and a great part of them corrupted sticks in the Tubes of the Womb, they cannot circulate and return to the Heart by the Lymphatick Vessels; here, by their long tarrying, they take new Pores, are disturbed by their own internal Fermentation, or by some external Cause, as Anger, &c. and are forced out of their abodes through the Lymphatick Vessels to the Blood, they cause greater Fermentations than usual in the Blood, thence they are forced all over the Body with the greatest violence, and because the Blood is more actuated by this Fermentation, greater store of it is carried to the Brain, whereupon a most violent Tempest and Commotion arises in it; so that beside the Spirits, some portion of the Blood, which best corresponds to the Pores, is discharged into the Tubes of the Brain, which, since

it is not very thick cannot cause a total Obstruction in the Nerves ; but because it is also thicker than the Animal Spirits , when it lights into the Pores of some Nerves , it obstructs them , hence it follows, because the Nerves are left destitute of Spirits by this Obstruction, and therefore hang flaccid , that the Patient sinks suddenly to the ground, and perceives it not.

A too great Effervescence of the Blood may also be the Cause of this Disease ; for by this Effervescence the Humors are made frothy, which froth obstructs the Nerves on every hand, and hence proceeds the falling to the ground, and the abolition of sense. And because the Blood is hurried to the head in excessive violence and quantity , and Spirits are bred, which being moved with great violence in the Brain, seek every way to get out; so that where there is no great Obstruction , here and there they get through into the Nerves, and so make their way to the Limbs ; whereupon, according to the diversity of the Part, into which the Spirits rush, divers convulsive Motions and various accidents arise : For if they repair to the salival Glands, they cast out slaver with some violence ; hence it is that in some abundance of froth comes out at the Mouth, inasmuch as the slaver is raised into bubbles by the Breath ; but if the Spirits be carried to other Part, as to the Stones, Legs, Bladder, Arms, &c. then other Symptoms follow. The acrimony of the Animal Spirits , as we said before, contributes much to this convulsive Motion, because by their vellication they very much open the Nerves. Bile of it self will scarce (as many think) produce

an Epilepsy , because it is not so much more subtil enough , and in passing through all Pores, most it will cause no more sharpness than a pricking over the Body ; but it can produce an Epilepsy ; because in a manner there is some Obstruction in an Epilepsy, and Bile does seldom or never cause an Obstruction, that it be pure, and not mixed with Humors.

S. 13. Prognostic.

NOW, according to our way of proceeding, let us lay down what hope there is of the Patient. Every Epilepsy is indeed full of Danger, and difficult to Cure, because the Nerves are made very lax by every Fit, that at length they lie very open to the incursions of any heterogeneous Matter , as if a Partition were made, and the Doors broken. Yet one is more dangerous than another, and more difficult to Cure, especially if the Fit is frequent, for the reason also, sometimes this Disease afflicts a man so grievously, that the best Medicines will scarce save him, tho no stone be left unturned for it. Wherefore it may easily be inferred, that an Idiopathic Epilepsy is more hazardous and difficult to cure than a Sympathetic Epilepsy, the longer the Fit lasts, the more the Disease must be reckoned dangerous, the Pores being violently opened, and as it were hollowed out by frequent incursions of this Matter. This cruel Disease uses to afflict Children, because they have a moist Brain, and therefore the Pores. The Disease also is

long, which unless it leave Boyes
the time of Pubescence, the so-
dity of the Pores of the Brain be-
ing daily encreased, and Girls at
the coming of their *Menstrua*, which
usually carry off the peccant *Lym-*
ph, the poor Wretches turn this
Syphean Stone, till the day of
their Death; for since great alte-
rations are made at the time of
pubescence, if it is not cured about
that time, it will hold them, as
long as they live. This Disease is
not to return, because the Pores in
the Brain are so made, that they
will easily again transmit the pec-
cant Humor. An inveterate Epi-
lepsy is incurable; for when the
disease is of some years date, it
is no more to be cured. And it
is not so much the saying of *Seneca*,
as of an Oracle, (which is applica-
ble to this case) *The Physician has*
nothing to do, when he is called to the be-
ginning of a Disease: for in this state
of affairs the Brain is corroded,
and then the interstices of the Pores
are insensibly pierced thorough.
Also an hereditary Epilepsy; by
reason of a disposition of the Pores
in the Brain, vitiated by Nature,
will give way to no Medicines, and
is incurable, as also is a connate
one. When it comes in Young
men after Five and twenty, it lasts
as long as they live, as *Hippocrates*
test. 5. Aph. 7. shows, in these
words, *They that have the falling Sick-*
ness before Pubescence, have a trans-
mutation, for they that have it after
five and twenty they go to their
graves with it. And as this Disease
invades most in the Spring time, so
at that time it is more dangerous
and grievous. Again, when the
whole Body is affected, and it
comes suddenly, so that the Patient
can apprehend no sense of the Mis-

chief in any Part of his Body, be-
fore it takes his Head, It is scarce
curable. Also, if the Disease be
very acute, have frequent Fits, and
great Symptoms, it will quickly
make an end of the Patient. It is
not so bad, if the Disease be con-
tracted from an ill Diet, and if it
yield to slight Remedies; to this
class belongs the Epilepsy of Maids
and young Widows, which may
easily be cured by Marriage. There
is no harm, if a long Fever take an
Epileptick Person, especially a
Quartane; for it is a Sign, that the
elastick and inflammable Particles
are taken away by this change. Nor
need it be much feared, when it
happens at the coming out of the
Small Pox or Measles; for when
once the Effervescence of the
Blood, stimulated by the *Lympha*,
and so enraging the Animal Spi-
rits, is abated, the Disease abates
of it self. Oftentimes an Epilepsy
is cured by loss of Seed, the pec-
cant Matter being discharged by
those passages; sometimes by snee-
zing, sometimes by Excretion of
the Phlegmatick Humor, by the
Nose, by Stool, Urine or Vomit.
Sometimes it is cured by blindness
and squinting, as the Curious have
observed, because the *Lympha*, which
is the Cause of the Calamity, coa-
gulates, and gathers to the optick
Nerves. This Disease oft ends in
a Sweat, sometimes in an Itch. Some
have observed this Disease to come
upon unseasonable anointing with
Mercury for the Itch, and the rea-
son is, because this mad anointing
violently drives abundance of the
peccant Matter, that is in the *Se-*
rum, to the upper Parts, and so to
the Brain, as to a common shore:
Trincavella confirms this by a two-
fold instance, of the Father and the

Son. This Calamity also ends in a shrinking of the Hands and Feet, and also in loss of Speech.

The famous *Willis de Morb. Convulsiv. cap. 3.* observed an Epilepsy turn by a sad *Metamorphosis* into an incurable Stupidity and Melancholy. Practitioners write, how it has turned to the Palsy, and to other Diseases, whom you may consult. We must go about other work.

§. 14. Dietetic Cure.

THE Method for removing an Epilepsy is, by these sorts of Remedies. The manner of living must be such. The *Air* must be moderately hot, pure and dry, you must utterly avoid an impure, contagious, cloudy, and too cold an Air, as we have experienced in a certain Prince, who being otherwise subject to this Disease, did notwithstanding commit himself to an extreme Cold, upon which he was immediately seized with this Disease on his Journey, with such violence, that he forthwith died of it.

The *Meat* must be moderately hot, easie of Concoction, and of good Juice, Birds of the Mountain, Hens, Thrushes, and Hares are good; and that of *Martial* has place here,

*Inter aves turdus, si quis me judice
certet,*

*Inter quadrupedes, gloria prima
lepus.*

Pidgeons, Lamb, Partridge and Capons are good, all which Food must be seasoned with Spice. The use of Capers is good.

Fish must be avoided, for according to the French Proverb, *Poi-*

sons fait poisson, i. e. Fish breeds Poison. All Pulse is put in the same Predicament, and also Garlic and Beans, of which the Greeks used to say, *ἴνα μὴ φάγῃ οὐκ ἔστιν ὀνίον*. Shun sharp Mustard Onions, (food for Smiths). Peas and Nuts. Some sorts of Meat also are reckoned to have a peculiar Faculty in breeding an Epilepsy, such as Kid, Goats Liver, Quails, Geese, Duck, Eels, Mushromes; and so every day, while I am writing. I observed a Child taken away with a Fit of an Epilepsy, upon his eating stewed Cabbage. The Cause of this Calamity uses to befall Intemperance when upon gussling too much Wine, and its turning sowre and coming on the Stomach, Gripes, Convulsion and Death do certainly follow. So also all sugared and rich things, contrary to the Opinion of the vulgar, are often the only Remedies of the Epilepsy, by reason of a hidden Acid. Therefore, in this way, Physicians do ill, when they advise Sugar to gratifie Childrens Palates.

The *Drink* must be a watry Wine, not old, nor impregnated with Sulphur; but in this Disease especially men must abstain from Drunkenness. For at London where I first began to practise I was sick some years ago, a Woman who had a double Tertian, took off a Quart of strong Wine, to satisfy her extreme thirst, without the By-standers knowledge, which the poor Woman was afflicted with a Fit of the Falling Sickness, yet I perfectly recovered her by Medicines, which I shall here mention.

Exercise of the Body will be good, if it be not presently hindered by Meat, nor in a bilious cacochymia.

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Body, left by these means the mass of Blood be troubled, and the morbid Ferments, that lie under the Ashes, break forth to the Head, whereupon the elastick Particles are excited, from which Convulsive or Epileptick Motions use to arise. Frictions of the Head must be seldom used, and the use of Venus must be moderate.

Sleep and Watching must be moderate. The Patient must take heed of Sleep, the Brother of Death, especially on the Day time, and immoderate in the Night. And he must not be so bold, as to sleep in the Moon-shine.

The Excrements of the Belly must be discharged every day either by Nature, or Art. Retention of the Seed, *Menses*, Hemorrhoids, &c. is bad; because Taints easily arise from thence.

Perturbations of Mind; for instance, Anger, Terror, Fear, Sadness, Care, have a great Power to cause an Epilepsy. Which is confirmed by *Helmont's* Observation, *Lib. de Morb. Arch.* §. 18. that an Epilepsy laid quiet for some Months and Years, and never rose, unless through Anger, Sadness, Venus, Child-bearing, &c. can you not without conjuring, tell that these, and such things as these, may well raise taints? Therefore all violent Passions of the Mind, unless one be willing to provoke an Enemy, must be avoided; for these Passions, like Stars, are very apt to alter the microcosmick Body.

§. 15.

Which things premised, now we will make our approaches nearer, and break in upon the Enemy by main force of Medicine:

And it appears, that the Ancients used one sort of Engines and the Moderns another. This was the Ancient's course, they cured the Disease with the following Medicines. If preternatural viscid, glutinous and tough Humors, or salt and sharp ones abounded, they used Preparatives, *i. e.* Oxy-mel of Squills, Syrup of Apples, Decoctions of Betony, Hyssop, Marjoram, Bawm, Root and Seed of Peony, Seed of Fennil, Anise, Water of Betony, Peony, Hyssop, Primrose, Sage, Bugloss.

Their Evacuators and Lenitives were these following, *Pilula elœtica*, *Aurea*, *sine quibus essenolo*, *Marocostina*, *Aloëphangina*, *Cochia*, *Fæ-tida*, Stewed Prunes, Cream of Tartar, &c. Those were their Evacuators, these their Averters, Clysters of Roots of Peony, Birthwort, *Asarum*, Mallow, Leaves of Rue, lesser Centaury, Betony, Mercury, Flowers of Chamomil, Penniroyal, Poley Mountain, Senna of *Alexandria*, to these Decoctions they add lenitive Electuary, *hiera Logadii*, half an Ounce, Oyl of Rue, &c.

In this Catalogue they rank Suppositories and Apophlegmatisms of Seeds of Peony, and Root of Pelitory of *Spain*, Masticatories of Staves-acre, Raisins, Mastich, Nutmeg, Castor, &c. and *nasalia* of Juice of Peony Root, Rue and Betony.

And Gargarisms of Wine and Vinegar, in which Flowers of French Lavender, Leaves of wild Marjoram, Hyssop, Betony, &c. may be boyled,

Also Sternutatories of Pepper, Hellebore, Castor, Peony-Root, Marjoram, Flowers of Lily convall, &c. They are likewise for applying of Cupping-glasses to the Shoulder

Shoulder Blades and the *Hypochondria*, and to the Hams or Ankles ; if the Disease come by consent, to the hind Part of the Head, but especially to the extreme Parts : also Plasters of Mithridate or Treacle.

They thought that Ligatures did much good, when the Patient feels a hurtful Air creep up to his Head, by stopping its passage, that so the imminent Fit may either be quite prevented, or if that cannot be, that it may at least be milder. But this sort of Remedy does more good in a remiss degree of this Disease, than in a strong one.

They ordered rubbing of the whole Body from the upper Parts downwards. They opened the Hæmorrhoids with Leeches ; they also set them to the Forehead or some other convenient places, whereby the peccant matter was exhausted.

They applied Rubificants to the Neck and other Parts, to hinder the poisonous Vapor from getting up: And they made such sort of Medicines of Mustard, *Cantharides*, *Euphorbium*, strong Vinegar and Leven.

They were so bold, as to apply Cauteries to the hind Part of the Head, which were otherwise dangerous.

Medicines to strengthen, and to waste the remaining Matter, and to amend the intemperature of the Brain, are Treacle, Mithridate, Conserve of Rosemary, *Acorus*, Sage, Water of Linden Flowers, Powder of Ivory, Hartshorn, Mistletoe of the Oak, &c. which must not be used only twice, or thrice, or four times, but very often. Among these we may reckon Man's Bones burnt, Asses Hoof, *Aster ferida*, Elecampane, Root and Seed of

Peony, Humane Skull, of a Man for a Man, and of a Woman for a Woman, by the daily use of which the Disease was thought to be cured in some People ; the Bladder of a Boe with the Urine, taken out while it is hot, and dried in an Oven, so it may be reduced to Powder, was counted an excellent Medicine by the Ancients, Decoctions of *Sassa-parilla*, *Guajacum*, &c. are not to be neglected.

Among Externals they used *Osimum Philosphorum*, Oyntment made of Oyl of Rue, *Euphorbium*, and Oyl of Fox. They also highly commended Bathing.

§. 16.

Hitherto we have given a Delineation of the old Metempsychical Method. And whereas the *Racemists* say, That this Disease is Astral, Occult, Malignant, Lunatic, Mercurial, and Vitriolate, they do joyn a Cure according to their Principles. For since the Disease is Astral, the Influence of the Stars must not be neglected ; but intimates to us, that we should observe them, both in the Digging, Preparation, and Administration of Remedies. And therefore under certain Aspect of the Stars they make and give the green or blue Liquor of *Luna*. For they call the Moon the external Brain, and likewise they call the internal Brain the Moon.

Paracelsus also refers higher Emeralds, Jacynths, Gramineæ, Jaspers, Rubies, and their true Colours, Coral and Pearl.

He also commends his *Aquila Celestis*, and his *dulcedo* or *manna curii*, because it preserves the

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crocosmick Mercury in its natural liquability. So likewise Spirit of Vitriol, the volatility and sweetness of sweet Wine, are reckoned the true Alexipharmacks of this Disease. Hither also belong Tartar, Sulphur, Antimoniates, Camphore, Oyl of Soot, Water of Linden Flowers or of Lily convall do greatly subdue the Falling Sickness.

To say nothing now of *Paracelsus* his Essence of Man's Brain and Skull, made with the rectified Spirit of Wine and Sage, which because of its consistency he calls *Galveda*; or a Magistery made with Spirit of Vitriol. Also Essence of Man's Blood, and Mummy are reckoned of great Virtue.

§. 17.

HElmont affirms upon his own Experience, that the injury of the Disease has been often removed by the volatil Salt of the Microcosm. And he ascribes the same success to the use of Cephalick Vegetables and other Specificks. He says also that an Elk's hoof rubbed on the Head, and hung about the Neck keeps it away; yet it loses its virtue by using, so that it cannot be applied afterwards with any success.

§. 18.

Now we will see what *Willis* his Cure is, and we shall find, that he differs from the common Method of Cure: for he will scarce admit of general Evacuation, that is, of strong Purges and Bleeding, nor of Sneezers, high Cordials, Cupping nor Scarifying, because of their notorious kindling and explosion of the Animal Spirits, and irri-

tation of the Nerves and Fibres. On the contrary, he commends all things that fix the enraged and volatil Animal Spirits, and that suppress their explosive Motions, when begun; which effect he promises to himself from Medicines endued with a volatil and ammoniack Salt, or with a vitriolick Sulphur, such as are Salt, and Oyl of Amber, Spirit of Man's Blood, or of any other Animal, Spirit of Hartshorn, Soot, tincture of Castor, a few drops either taken inwardly in a proper Vehicle, or held to the Nose: for he says, these things as surely give relief, as the Gospel is true. He also makes use of Frictions all over the Body, by means whereof the Animal Spirits are gently diverted from going into Explosions, and are hindered as it were by fetters.

He thinks also that Secrets and Arcana, which they call Specificks, should not be omitted in this case, and for a very good reason, because it is the Nature of them by strengthening the Brain, and contracting its Pores, to hinder the concurrence of the thronging Spirits, and so they fix the Spirits that are in the midst of the Brain. For all Antiepilepticks as Peony, Mistletoe, Linden Flowers, Lily Convall, &c. have an astringent Faculty, whereby they straiten and close up the over-lax and open Pores of the Brain, and so stop the passage of the morbidick Matter that causes the disturbance.

The Medicines that he takes from Minerals and Animals are Man's Skull, any Blood, Amber, Coral, and volatil Salts.

And whether it be a Child or a grown Person, that is taken, if he suspect store of acid Phlegm in the Stomach,

Stomach, he gives a Vomit for several Months, four days before the Full Moon, namely, Wine of Squills, mixt with Oyl of Sweet Almonds, or *Sal vitrioli album*, or *tartarum emeticum*. Then in an excessive fullness of Blood he orders a little Blood to be taken from the Arm, and, when there is absolute Necessity, he gives this or some such like Purge.

Take of Refine of Jalap half a Scruple, *Mercurius dulcis* fifteen Grains, Castor three Grains, Conserve of Peony Flowers one Drachm. Make a *Bolus*; or give them in form of Pills.

These are the stout tried Medicines: the following, which they call Empirical, are like fresh-water Soldiers, who sometimes show no great Valor in the Victory, but overtake the Enemy in a panick fear when others have routed him, that is, the Livers of Frogs, Bryony Root, Powder of a Cuckow, Hare's Renner, and Lungs, a Wolf's Liver, Stones taken out of Swallows, Kite's Liver, Crow's Eggs, &c.

Take these upon the Author's credit, namely, Amulets of Peony Root, Elk's Hoof, Man's Skull, Mistletoe of the Oak, Peony Seeds hung about one; but their vertue is more operative in the Stomach, than hung about the Neck. He thinks an Amulet of an Elder branch found growing on a Willow is of great vertue, and he glories, that he has often cured with that Remedy.

Externally also he uses Oyl of Amber, to anoint the Nostrils, &c. which you may see in himself. But I cannot omit that the aforesaid *Willis* has put into the class of pre-

sent Remedies Diaphoreticks, Sweaters, Baths and Spaws, to which he advises his Patients to fly, as their last refuge.

§. 19.

Sylvius his Opinion is, That all things are very good, as fixt acid volatil Spirit, which dissolves and disturbs the Animal Spirit, that is, lixivial Salts, either fixt volatil, but then they must be dissolved: for, he thinks, that Medicines consisting of a fixing and volatil Salt are good in an Epilepsy, therefore he prescribes Rue, Mountain, Roots and Seeds of Penny, Valerian, Toothwort, Flower of Lily convall, Linden Tree, all things that abound with a volatil Salt, Squill, which manifests a volatil Salt by its Acrimony, Myrrour of the Oak, Hazle wood, Box, Spirit of Tartar, Spirit and Salt of Man's Skull, Harsh. Among fixing Salts he reckons Iron, Hoof, Hare's Renner, Pearls, Dung, a Boar's Bladder and the like, dried in the Oven. He takes particular notice of Castor, which consists of a volatil Salt, as an excellent Antiepileptick, also of Castor Amber, Precious Stones, Nitre, Cinnabar, which *Crato* calls Load-Stone; all which things have an admirable Faculty of fixing acid Spirit.

He denies, that Bleeding, Vomiting, Purging, Diureticks and Sweaters are good of themselves; he highly commends upon Experience Frictions, Issues and Section. Among Externals he orders spirituous and sharp things, that is, things endued with a fixt volatil Salt, and that fixt acid Spirit, to be held to the

Nose; such as Spirit of Sal Ammoniac, Soot, &c.

§. 20.

The Cartesians think they have done the work, if they can but smooth the acute and angular Particles; and this they endeavour to do by *Pulvis Marchionis de geminis*, Decoctions of Woods, and other specifick Cephalicks, which are mentioned before. Also *Tinctura Caelestis* is good for the same purpose, which is made at *Hanover*, and is an experienced Medicine; a few Grains of it may be given.

§. 21.

Hitherto we have seen other men's Opinions about curing this Disease, now we will try what we our selves can do. It is evident from the Premisses, that above all things the sharp serum must be corrected, since in it lies the source of all the Mischief, and from it arises the Explosion of the Animal Spirits, and their disorderly and perverse violence upon the Nerves; whereas according to Nature it ought to flow in with a gentle and slow pace, they rush violently upon a Machin made up of all nervous Fibres, and cause a contraction and Concussion. We ought therefore to drive out this serum by whatever Remedies we can find against its coming, or when it comes, by observing a due Method of Cure; which is performed primarily by three Indications, 1. Curatory, 2. Preservatory, and 3. Vital. 1. The Curatory respects the Disease itself, and the Fit, and either quite hinders it from coming, or at least alleviates it.

2. The Preservatory respects the very seminal tinctures of the Disease, and the evacuating and altering the morbid Causes and Impurities, or the morbid Ferments, by utterly extirpating the Disease with Universals and Particulars, and by preventing return of the Fit.

3. The Vital gives truce to the fortified Enemy, and does not expel it, till strength be recovered, and tries all means to recover the Patient's strength. The matter of the Remedies is taken from the threefold Fountain of Chirurgery, Pharmacy, and Diet.

When this sad eclipse of the Animal Faculty is coming, or come, the whole intencion must be directed to the Cause and the Symptom. There is a twofold Symptom in this Disease, namely, a Cessation of the Animal Faculties, principal and sensitive, and a violent contraction. Therefore the Patient must be raised out of the Fit by loud shouting, pulling of his Limbs and Privities, and by rubbing the Neck and Back especially, with apoplectick Spirits or coarse Cloaths, or by any proper means that opportunity may afford. Ligatures are good, and Clysters made with volatile Salts. Let the Mouth be wrenched open either by the Hand or by an Instrument, both that the Patient may breath more easily, and that the froth may run out of it, and also that he may not bite his Tongue. And the Mouth may be kept open either with Mistletoe, or Peony Root, or Elk's Hoof, or a little Bag filled with Masticatory and Epileptick Medicines. It is customary also to unbend the Thumb and Fingers for to break the violence of the Disease, and to put an Elk's Hoof into the hand.

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The Head and Breast should be kept upright, that they beat not against the ground. Some advise the anointing of the contracted Parts with warm Oyl; but I should rather use spirituous Aromatics, especially Spirit of Scurvy-grass, by which I can affirm, I have often given chace to the Enemy. Bruise a little Rue also between your Fingers, and put it into the Nostrils, so you may apply Poley Mountain; and other volatil Salts may be applied to the Nose, which will serve to shorten the Fit. As for the noble virtues of Rue, *Sylvius* tells us that both the Garden and wild Rue abound with a sharp, biting, volatil Salt, which is a proper corrector of an acid Spirit.

You may pour in Epileptick Waters, that is, *Hirundinum cum castoreo, picarum*, of Lily convall, tincture of Castor, volatil Spirit of Sal Ammoniack, Soot, Urine, Hartshorn, *Convulsivus Waldschmidii, balsamus nervinus Scheferi*.

The Patient may be raised by *Wedelius* his *Euporiston*, that is white Vitriol in Water of Lily Convall or Marjoram, with a little Castor and Amber, or by freezing Powder, which every one knows. Cephalick Balsams may be applied to the Nose, namely Balsam of Marjoram, Amber, Rue; among these we may reckon Spirit of Sal Ammoniack and an urinous one; for instance,

Take of Spirit of Sal Ammoniack,
Hartshorn each half a Drachm.

Mix them. Or,

Take of Oyl of Castor two Drops,
Balsamus vite, of Rue, Oyl of
Amber each what is sufficient.
Mix them.

But if the Disease come by con-

sent of the Stomach, and if faintness, and other signs of a flaccid Stomach have gone before, a Vomit may be given either the old way, of *Elektuarium Diacanthi*, or, which is better, the new way, of *Tartarum emeticum* from Grains to four, mixt with some per Liqueur; for when the acid residing in the Stomach is evacuated, the Disease is gone immediately, which I have experienced in Children with good Success, when the Milk has upon some count or other been turned to a ferruginous or green colour. If these things must be done; but in the Fit one thing must be omitted, is, Bleeding, otherwise the Patient's Soul would fly out at the first, unless one would draw a little blood, give the Patient a drop of his own Blood in some Water; yet if there were a Plethora, I should not scruple to bleed in the Forehead or under the Tongue. If the Fit last long, come at short intervals, stimulating and strong Clysters be given at the time of recovery. If this Disease come in Women from consent with the Womb, stinking things, that is Feathers of Peacocks, and Partridge, and other trash, in inventing which, it would make a Philosopher smile to hear, what the cunningness of good Women and men does contrive. That is something to the purpose, *Castoreum* and Castor tied up in a cloth and held to the Nose; and Spirit of Sal Ammoniack is either as effectual. When it comes from the Obstruction of the *Menses* or Child-bed Purgatives give a Clyster of hyssop and bleed in the Foot, and

precipitating and throwing off
Epileptick ferment, we advise
Whick Wine made of Anti-epi-
cks, Purgatives, and Hyste-
to be used out of the Fit.
the Fit we use stinking things,
to quiet the enraged Animal
rs. If sweet scented things be
either inwardly or outwardly,
it is not only encreased, but
ned. In this case these Speci-
are proper, Amber, Mother
ail, and all things that contain
Alkali in them, which are
to soak up that exotick acid;
also proper to give *Elixir Pro-*
ris, with Essence of Castor and
about the Quarters of the
n, because at that time the
ge Particles in the Blood and
are apt to ferment. And
we have done with the Cura-
Indication, we will proceed to
Preservatory, where we must
especial notice, that if the
of the Disease lie in any one
in Part, beside other things,
ings, Ligatures, Cauteries, both
l and potential, Serons, Issues,
ers and Leeches are proper.
e commend Cauteries, others
emn them: I dare conclude
ng, because I have not expe-
ed them; only by burning the
m of the Head with Indian
s, I happily cured one of Six-
years of Age. I cannot tell
to say of the Custom in *Lybia*,
e the People burn the Crowns
their Childrens Heads with sap-
wood, when they are four years
to preserve them from the Epi-
s. The same thing is at this
day in use at *Florence*, and
defend their Practice by this
on, because of two Evils, in all
e mens Opinions, the less is to
chosen, so that it is better to

try any means, than to leave a poor
Creature to such a torture; and
here the Aphorism holds good,
What Medicines cannot cure, Fire
Cures.

Instead of an actual Cautery, a
potential one made of *Cantharides*,
Leven and Vinegar may be applied
to the coronal Suture; for it is
most certain, that when a passage
is thus made, the elastick Particles
get out. In Children Blisters may
be raised in their Necks, and pricked
with a Needle, and suffered to run
a Month or longer.

Some also use the Trepan for the
same purpose, without any hazard,
concerning which see *Severinus*.
Arteriotomy has likewise often been
performed with good success.

We have seen the Chirurgical
Remedies, now we will proceed to
the Pharmaceutick. And in the
first rank we meet with volatil Al-
calies, also earthy things, which
soak up the vitious acid. Next
comes a twofold Sulphur of Anti-
mony, good to stop Epileptick Fits,
made either without or mixt and
sublimed with Mercury; but that
is best which is precipitated a cer-
tain way from the *Scoria* the last
time. The Dose may be, if there
be occasion, one Grain, and for
strong Constitutions, two; it pre-
vents as well as stops Fits, and
carries off the Cause of the Disease
by Vomit, if it be found in the first
ways; you may give it to little
Children, and repeat it without
danger. It must always be given
with *Mercurius dulcis* before the new
Moon for prevention; and several
times repeated out of the Fit it is
good to extirpate the malignant
Ferment. And by a gentle Brea-
thing it quiets this Disease, as
the Learned *Etmuller* experien-
ced

ced in his *Valetudinarium infantile*.

Among these we reckon earthy things, such as the Skull of a Man, who died a violent Death, red Coral, Bezoar, oriental and occidental, Sea Unicorn, and the Fossil: for all these things soak up the acid that trouble the Nerves, and so make the Disease either more tolerable, or else sometimes quite remove it. In this class we rank Minerals, and in the first place native Hungarian Cinnabar, shining like Crystal, and Antimoniates, (as good as that) the use of which I would earnestly recommend to all young Practitioners. Here is a Prescription;

Take of choice native Cinnabar two Scruples, *Pulvis bezoarticus Senneri* one Scruple, *Bezoarticum solare*, *Magisterium cornu Alci* each half a Scruple. Mix them. Make a Powder for several times taking. Or,

Take of native Cinnabar half a Drachm, or Cinnabar of Antimony one. Scruple, volatil Salt of Hartshorn, of Man's Blood each half a Scruple, *Laudanum*, *opiatum* one Grain. Mix them for several times taking.

Or the Epileptick, Cephalick Powder following, which is attributed to the Emperor *Rudolphus*.

Take of Cinnabar of Antimony half an Ounce, Unicorn two Ounces, Hartshorn, Mistletoe of the Oak each one Drachm, *terra sigillata*, Man's Skull prepared; Pearl prepared, each fifteen Grains, Emerald, Cinnamon, Saffron, each half a Scruple. Mix them, and make a fine Powder.

The virtue of this Powder against this Disease is plain, as is plain from its basis, of Antimony, which recommends for strengthening the and composing the Animal. And almost all the Cephalick Epileptick Powders of the famous Physicians consist of the

Take of *Specificum cephalicum Quercet. Michael.* or *Wal* one Drachm, *Magisterium Skull, facula* of Peony one Drachm, *Theriaca caelestis* five Grains, *Elephas succini* six Grains. Mix. Make a Powder for use.

This following is *Mich* famous Cephalick;

Take of native Armenian rectified by six Sublimations more, or of Cinnabar of Antimony, as often rectified Ounces, *facula* of Peony one Ounce and an half, *Magisterium Epilepticum* half an Ounce, *Cordiale* two Ounces, *Chrysocolle* Gold. Mix them. Make a fine Cephalick.

The *Magisterium Epilepticum*

Take of Elk's hoof, Man's Skull died of a violent Death, horn, Hartshorn each one Ounce, true oriental Emerald one Ounce, true Unicorn two Drachms. Powder them, and pour to them a *Mentha* of Salt and Alcohol is sufficient, dissolve the precipitate the Solution Spirit of Vitriol, sweeten with Precipitate, and add a quantity of Amber one Drachm.

The *Magisterium Cordiale* ;

Take of Oriental Pearl prepared half an Ounce, red Coral, Stone of Perch each one Ounce, Shavings of Ivory, Hartshorn each six Drachms. When they are powdered dissolve them in the foresaid *Menstruum*, and precipitate them with Spirit of Vitriol, then sweeten them. Of these two *Specificum Cephalicum* is made.

Theriacale celestic Hanovienfis is only commended and approved Experience. So is *Pulvis epilepticus infantilis Ludovicianus* with Gum, as also *Panacea Vitrioli*. I also commend that Anti-epileptic *Arcahum*, which *Bartholinus* mentions in the *acta Hassniensis* 5. Pag. 73. and which I have experienced several times.

Take of Man's Skull, Peony seeds each ten Grains, white Amber seven Grains, Gold prepared two Grains, Pearl prepared, Coral each five Grains, Bark of Elder growing on a Willow ten Grains, Castor three Grains, Powder of Marygolds nine Grains. Mix them, make a fine Powder to be given in Lavender water. Or, Take of volatil Salt of Amber, Man's Skull each one Scruple, Castor two Drachms, infuse them in a sufficient quantity of Spirit of Wine, let them digest and circulate. Make an epileptic Tincture. The Dose is twenty Drops.

Or,

Take of Spirit of Sal Ammoniack, made with Quick-lime and Spirit of Wine half an Ounce, pour upon Castor, and draw a Tincture, as before. Or in form of a Powder.

Take of Man's Skull prepared one Drachm, Cinnabar of Antimony half a Drachm, Castor fifteen Grains, volatil Salt of Hartshorn, Amber each half a Scruple. Make a Powder for several Doses, as there shall be occasion.

So also Opiates may be joyned with these things, because they meekly pacifie the fierce and disordered Animal Spirits, and keep them within their Station, which would undoubtedly, to use *Helmont's* word, make our *Archæus* mad. When it is accompanied with the Gripes, and Loosness with a hooping Cough, especially in Children, as it uses to do, the said Opiates are very convenient. In the Cure of an Hypochondriack Epilepsy, the Body must first be purged with the following Purge.

Take of *Mercurius dulcis* twelve Grains, Resin of Jalap six Grains, Man's Skull Philosophically prepared one Scruple, Tincture of Amber, Castor each five Grains, Conserve of Peony Flowers two Drachms. Mix them, make a Bolus. Or,

Take of Resin of Turbith, Agarick each six Grains, *Flores salis Ammoniaci Martialis* five Grains, volatil Salt of Amber two Grains, distilled Oyl of Majoram, two Drops. Mix them, make Pills.

Then the redounding Acid must be reduced to its natural state by *Vitriolum Martis*, our absorbing Salt, and *Zwelfer's* essential Salt mixt with Sugar-Candy; after Dinner and Supper also they must take some Powder of Carminative Seeds, with a little of Man's Skull scraped. But this we must take notice of,

That if the Disease arise from any other Part & Cause, Anti-epileptick Specificks are not always proper, but things appropriate to the Part affected. Nor must we here forget Absorbents.

In a Scorbutick Epilepsy Spirit of Sal Ammoniack mixt with our Antiscorbutick Elixir exceeds all; and the following Powder is good.

Take of the Back-bone of a Viper prepared twenty five Grains, Ashes of a Mole calcined white half a Drachm, Man's Skull, Bezoar stone each twenty four Grains, Sugar of Pearl two Drachms. Mix them. Make a Powder. The Dose is as much as one can take up on the Point of a Knife in the following Vehicle.

Take of Water drawn off Brooklime Juice, herb Mercury three Ounces. Mix them. Or,

Take of *Diaseedium*, half an Ounce, Conserve of Groundpine two Ounces, Flowers of Linden-tree, Meadow Rue each one Handful, Shavings of Elk's Horn half an Ounce, Decoction of *Sarsa Parilla*, Juice of Brooklime each two Pounds, *Pulvis Spasmodicus* six Drachms. Destil them in glass Instruments, and add of the Tincture of Peony-root Bark two Drachms.

The Dose of this Water is a Spoonful at a time, whose virtue is to dissolve the sharp Serum either by Sweat or Urine. Or;

Take of my Antiscorbutick Elixir two Drachms, my Epileptick Elixir one Drachm and an half, Mix them. Put it in a glass,

Give twenty Drops in some Water. In Hysterick Motions, whatever Medicine given, they must have them.

I will impart a Powder I have had Experience of many times, to the great use of Epileptick Persons. *Fixing Dragon.*

Take of Nutmeg one Drachm and an half, Ashes of a Hare No. 3. Powder of *Benedictus* four scruples, white Amber, Mistletoe Oak each two Scruples half, prepared Pearl one, burnt Harts-horn half a true Unicorn one Scruple, skull three Drachms, Peony one Drachm and an half, candy two ounces and a half, Drachms, Leaf Gold as much as please. Mix them. Make a Powder. The Dose from half a Drachm to four or five Scruples.

Man's Blood rightly rectified with as much rectified Spirit of Wine, yields a Spirit of grateful smell, which pricks the Tongue, and is a potent Antispasmodick. The Dose from fifteen to twenty Drops in some proper Vehicle.

And now we must rectify things in general, which Animal Spirits into order, the Nerves, and often either gate or quite remove the Motion.

Take of *Willis* his cephalick Spirit of Sal Ammoniack, Spirit of Vitriol each one Drachm. Mix them. Give twenty Drops.

Tincture of Coral, made with a
 of our sweet calcined Nitre,
 Spirit of Aniseeds, or only with
 Oyl (which is better) will do
 it, because when it is made the
 er way, it wants an acid Men-
 m. Some make a great stir with
 tincture of Luna, but I am not
 ing in it but Vitriol, as appears
 the blew colour, one may easily
 is, it can be of no great virtue in
 Disease. The *Primus ens* or Sap
 the Linden-tree, drawn out of the
 e in February, if three Ounces
 be taken thrice a day, does won-
 I reveal this as a great Secret
 his Disease, the Livers of Frogs
 en in the Wain of the Moon, and
 ed in the Sun, which must be ta-
 a Drachm at a time for several
 es in Powder. And I give
 another, namely Earth-worms
 wned in Rhenish wine and dried,
 a Drachm of the Powder given
 out the New Moon for three
 nths; by which means, I success-
 y cured two Youths, fourteen
 rs of Age. The Powder and
 es of a burnt Mole is of the like
 cure.

There lies likewise a singular anti-
 eptick virtue in the dung of a
 cock, a Stork, a Lion and a Man,
 on certain Experience. Some have
 ay of fermenting & volatilizing
 m, and so getting a Spirit which
 ells as well as Musk or Amber.
 eselius, first Physician to the King
 Poland, writes, how that King,
 en he had been miserably afflicted
 th an Epilepsy, was cured by his
 le's Secundine, after she had
 ough forth a Son, and valued it
 ore than he did his Scepter. Some
 lackish People cry up Box leaves
 the Sky. But they do better,
 o in the beginning of the Fit give

the sharp, saline, volatil Liquor of
 Camphore, mixt with the Essence
 of Opium: for Opium combined
 with Camphore, and so strengthen-
 ed by united forces, composes the
 raging Animal Spirits, and having
 pacified the Fit, causes a sweet sleep
 and a wholsom sweat. Among these
 saline Volatils, Amber or its volatil
 Salt, or Liquor, or Oyl shines in my
 Eyes, as the Moon among the lesser
 Stars. The Blood of an Ass, and of
 several other Creatures, as of a
 Cat, &c. taken from behind the Ear,
 and a few drops of it given, has hel-
 ped many. Some cry up the Skull
 of a black Hen, others give the
 Bones of a Swines Head.

In Obstructions of the *Menses* all
 such things are good as put the Blood
 in motion; yet they must not be ever
 subtil, lest by their levity they ra-
 ther get into the Head than the
 Womb, but heavy things, which
 follow the motion of the Blood
 downwards, and yet open Obstru-
 ctions.

And for a Conclusion, to these
 general Internals we will add gene-
 ral Externals. And the principal are
 Spirit of Sal Ammoniack held to the
 Nose, Balsam of Rue, Amber, &c.
 Balsam of Amber is of excellent use,
 if the Pit of the Stomach or Navel
 be anointed with it. And the Crown
 of the Head may be anointed with
 Oyl of Amber, but with caution and
 sparingly, lest it befall you as it befall
 a Physician, who had anointed his
 Patient with it and he complaining
 of a grievous Head-ach, ordered his
 Physician that when he was dead,
 he should open his Head, and upon
 opening it, the Physician found the
 Dura and Pia mater, and the sub-
 stance of the Brain under them mar-
 ked with a yellow spot the breadth
 of a Crown Piece, and as it were

sphacelated. It is safer therefore to use quilted Caps of cephalick Spices. And besides the aforesaid Balsom the following Liniment may be applied to the Navil.

Take of Bever's greafe 2 Drachms,
Sal saturni one Drächm, Oyl of
 Amber three Grains. Mix them.

And it will do well to chafe the Back Bone with sweet scented Oyls, Apoplectick Waters, Spirit of Lily Convall, Ants, Hartshorn, &c. and sometimes to give four or five drops of the Gall of a young Whelp, and the Heart of a Mole dried.

Divers Plasters also may be made use of, namely *Emplastrum de betonica*, *cephalicum*, *epilepticum*, &c. and oily or sulphureous fumes which are sweet may be used. Also a Plaster of Wax and Oyl of *St. John's-wort* may be applied to the Pulses.

Annulets of an elder Sprig on a Willow should not be lected: nor Roots and Seeds ony, which Seeds of Peony, &c. in some Liquor in Honey one kept as a Secret, where did Miracles. Elk's Hoof, and things are now known to cure and we have given you the ment of the Ancients concerning them. The hanging of the Masterwort about the Neck Invention. A live Lizard hung the Neck does miraculously epileptick Fits, this I write my own Experience, and allows cut open alive, and apply the Crown of the Head. The reer, of these Remedies brought up by Transplantation of Beasts, and indeed into a Beast the German *Ephemerides*, and 7. Obs. II. do relate. And we conclude this Disease.

CHAP. X.

Of an Apoplexy.§. 1. *Names.*

With my Reader's good leave, I will premise in brief the *Ætiologia* of an Apoplexy. It is a *Sideratio* or *Blasting*, *Morbis* *stans* or the *stonying Disease*, *Recessus nervorum*, and *Paralysis universalis*, an universal Palsie. *Paralysis* calls it *Gutta*.

Description.

It is described to be (by universal consent) a sudden abolition of all animal Actions, that is, of Sense and Motion, with the hurt of the principal Faculties, depending upon the hindrance of the Influence of the animal Spirits; for the Patients are as if they were struck with Thunder, without any sign of Reason remaining, although usually a dulness of the Senses precedes, and oftentimes the Brain is so weakened, that they become stupid in their Judgment. It is called *Atonitus*, because the Mind is stupid as well as the Body; therefore it may be concluded to be a very dangerous Disease, of which few recover, or if they do survive, yet they usually remain Paralytick. None will deny that an Apoplexy has great affinity with an Epilepsy, and agrees with

it in many things, only they differ in this, that an Apoplexy is more dangerous. There is the same affinity between an Apoplexy and Fits of the Mother, a Suffocative Catarrh, and a Lethargy.

Difference.

Yet it differs from these, because in an Apoplexy the Motion is quite abolished, and the Parts remain immoveable, which is not found in the other to such a degree, for they sooner cease and leave less harm behind them. An Apoplexy is judged to be twofold, Phlegmatick and Sanguine, as it arises from Phlegm or from extravasated or stagnating Blood.

§. 2. *Part affected.*

THE Ancients held the Part affected to be the Brains, that is, the *Tower of Pallas*, wherein, besides the sensible and motive Functions of the Soul, the principal also are performed, and they thought that it was more especially in the Ventricles of the Brain, and they contend, That it is an impediment rather in the *rete mirabile*, than in the substance of the Brain for this reason, because of the sudden and

unexpected coming of an Apoplexy. Some of the Moderns take the Nerves and Animal Spirits for the Parts affected; others the whole Brain.

Helmont, that severe Cenfor of the Physick Schools, in his Tract *De sede Animæ* 1. 10. 12. makes it to be the *Præcordia*, and the left Ventricle of the Heart. *Paracelsus* owns the Brain, Lungs and Wind-Pipes for the subject of this Disease; from whom, his Disciple, *Quercetan* sometimes differs, and blames the Heart. *Willis* thinks the *Corpus callosum* in the *Cerebellum* is the seat of an Apoplexy, and that the Animal Spirits in the *Corpus callosum* are the subject of it. The *Cartesians* prove by reason, that here the Pores of the Brain are ill formed, and obstructed either by Phlegm or Blood distending or compressing the Arteries too much. The most experienced *Wepfer* does not blame the great Ventricles, but the medullary substance of the Brain and *Cerebellum*. Others take the mass of Blood for the subject; but it were tedious to give all Mens Opinions and Reasons. Therefore, to pass by them, we acknowledge the whole Brain, as to its porous substance, for the Subject, but we do not question but the Disease resides in the *medulla oblongata* of the Brain, as in the principal subject, of which I shall say more in the Cause.

§. 3. *Diagnostic.*

NOW we must proceed to the Signs, by which this Disease shows it self. Head-ach coming suddenly; dulness of Apprehension, *Vertigo*, torpidness, drowziness, chillness in the extreme Parts, and the whole Body, mist before the Eyes,

grating of the Teeth in an abundance of Snivel and Spittle often go before an Apoplexy (but there is an Apoplexy (but violent) which takes one without any of these Signs running. But the Signs of a seizure being present do immediately show themselves, for when they are taken with it, they are void of Sense and Motion, as if they were dead, they cannot speak, Throat and breathe difficultly, fall suddenly to the Ground, often with a shriek, preceded by a difficulty of Breathing, so that one can scarce perceive the Patient lies as if he were dead, and his Breast feels as if it were tied down with a Girdle, hindered from heaving, and the animal Actions are taken off suddenly. Respiration indeed continues, and is not quite abolished, the Nerves, through which the Spirits often flow, are more or less therefore not so apt to be affected. And the respirations are very open, and can scarcely be obstructed, but some Pores remain open. Some first shut the Mouth, others bring up the Nose whatever is taken into the Mouth. The Urine is usually moderate in quantity, of a pale colour or arginous, without any like meal. The Pulse is usually unequal, intermitting, and languid, though sometimes swift. Their Eyes are shut when they slept, yet indeed they sleep, but lie dull and stupid. And though they look full on the By-standers, they neither see nor hear, they feel, though they be pricked, so that not any sign of sense or Understanding appears.

Limbs hang lank, and if they be lifted or set up, they fall down like a dead thing; they breathe with their Mouth open, and rattle in the Throat. And to be short, the Patient is like a dead man, only he is known to be just alive by his breath, which may be known by setting a Basin of Water upon his Breast, whereby the Ancients found the motion of the Breast, and by consequence some life remaining. But now Men go a nearer way to work; for the Breath may be found by holding fine carded Wool, a Feather or a Wax-candle lighted, to the Mouth, all which will move at the 1. st Breath; or a pure Looking-glass, which will lose its gloss by it. Besides, some motion remains in the Stomach and Guts, though imperfect. And when men can scarce be perceived to breathe at all, we say they have a strong Apoplexy; but when they take some breath, though unequally and disorderly, yet the Patient is in more hopes: for when the Disease is milder, some sense is left, and now and then motion, but so stupid, that there is a kind of Palsy or Numbness remaining. They often falter in Speech, and the Tongue feels stiff: for motion and sense must need cease, when the Animal Spirits come not to those Parts.

§. 4. Cause.

NOW having already examined the Signs, we will proceed to the Causes; and first give you another Mens state of the Case. The Galenists think, That the immediate Cause is the hindrance of the influx of Animal Spirits into the Nerves, by Humors and condensed Vapors, especially tough, thick

and cold Phlegm, because it obstructs the Ventricles of the Brain, the Original of the Nerves, and the Arteries and the *rete mirabile*, because, as they say, Spirits do in order of Nature flow through these into the Ventricles of the Brain, and therefore if these forementioned Vessels be filled and obstructed, then of necessity the Spirits and Animal Faculties are hindered from being diffused into the Organs of Sense and Motion, and so they mark out the Cause, why a Man is deprived of Sense and Motion. Among the more remote Causes, they reckon Crudities, drunken Debauches, long Watching, a cold Air, over-cold Food, nor do they except *Venus*; all which, as they say, are able to cause an Obstruction of the said Passages, and a dissipation of the Animal Spirits. So they are strongly of Opinion, that a fall or blow on the Head, do cause a Flux of Humors to the Brain, which if they fill the principal Ventricles of the Brain, cause an Apoplexy. In their Opinion some fall into an Apoplexy upon a slight Obstruction, which is cured now and then by thick Vapors, or by a few Humors got into the Ventricles of the Brain.

§. 5.

AND upon this occasion I cannot forbear reprehending of *Galen*, a false Disciple of *Hippocrates*, who often wrests his Master's words to his own sense, and sometimes to one quite contrary, as appears in this case, and in several other, where he ascribes this impotency of Motion to the Obstruction of the Ventricles in the Brain, which *Hippocrates* will rather have attributed to the standing of the Blood.

Blood. For, says He, From its standing are extreme chulness, Vertigo's, interception of the Voice, and in this Disease People are Epileptick and half Paralytick. And in another place, And while the Blood is not moved it cannot otherwise be, but that the Body must be quiet and stupid. We shall say more, when we deliver our own Judgment of the Cause.

§. 6.

NOW we must walk in the Hermetick Field, in which great variety offers it self. The Paracelsian Pathologists sometimes make the Cause to be a Cacochymical Mercury sublimate, sometimes a coagulation of the Mercury; and sometimes they say, that a Gutta, according to their Master's Doctrine, is bred of a Martial Poison; sometimes for want of the Synovia, because this Disease is nothing but a separation and defect of the Synovia in the Part; for, say they, a defect of the Synovia causes insensibility and a privation of Motion. But Paracelsus explains this Synovia of his so variously and intricately, that without an Oedipus, no one can apprehend, what he drives at, *Traët. de Gutta Conf. & l. 7. Param. c. 1. §. 4.* where he explains one difficulty by another that is greater. Some of the Hermetick Tribe accuse a Narcotick Salt and Sulphur, which fix the Animal Spirits, but who can recount all their Opinions? Yet all of them in a manner aim at this, That an Acid by coagulation causes all this Disturbance.

§. 7.

THAT severe Critick of the medical Schools, *Uan* frames to himself strange Enquiries, namely an Anodyne Poison, *Ans Poteſtativa*, for so he calls them, *Traët. de Morb. §. 9.* he explains how an Apoplexy is bred. Therefore he means to retain Power which takes away Sensation and Motion. *Tachenius*, Helmscholtz Scholar derives the remote Cause of this Disease from a coagulating or wild Gas drawn in extrinsecally with the Air, which fixes the Spirits, and checks the Motion and Fermentation of the Blood.

§. 8.

SOLBIUS thinks, that the remote Cause, that is, the Cause away of all the Animal Functions depends upon the defect or disturbance of the Animal Spirits; he holds, That the Animal Spirits may be made immoveable and stupid, and that they are deficient either by reason of the strained obstruction of some Nerves, or by reason of compression, arising either from Phlegm or an Acid, because they are cut asunder. He says, That the Cause of this Disease is, for that the Animal Spirits are not duly separated, that is, some fault in the Blood, that the Blood be inept, coagulated, replete with a Narcotick Spirit, also makes no question but the passage of the Spirits is quite intercepted, when the Arteries are closed by any Cause, or when the Marrow is any way preternaturally straitned. And there is more purpose, which I shall not now

§. 9.

And now we will go to our mechanick Conceptions; for natural Knowledge, as nothing fails humane understanding more, in the abyss of abstracted Notions; so nothing helps it more than to set things mechanically before Mens Eyes. And this Catoptrick endeavours to do. He, therefore, and his followers think, That this Disease there is a too great opening and dilatation of the Pores of the Brain, and the *Plexus Choroideus*, whereby a total Obstruction may easily arise in the Brain and Origination of the Nerves, by a foreign Humor flowing thither, which being made, the influx of the Animal Spirits, is stopt, and when that is hindered, all the Limbs grow flaccid, like dead mens, just as Sails, when they are not extended with Wind, hang flapping. And the reason why respiration remains in the measure, they say, is, because the Tubes that reach to the *Septum transversum*, are larger than ordinary; wherefore while there is but little Animal Spirits remaining, the passage to the Heart, the chief Muscles, is easier. Remotely they blame the Blood or thick *Lympha*, in as much as these being extravasated in great quantity in the Brain, may easily obstruct the Pores and *Synapses*, but especially the origination of the Nerves, by which Obstruction the influx of the Animal Spirits is quite taken away, and an Interruption of Motion and Sense must necessarily follow. So they say, that an Apoplexy may also come from an external Cause, a Wound, Blow, or Bruise on the Ear, or Contusion, for the foregoing Reasons.

§. 10.

Now we will give you our own Opinion. And, to be plain, we take it to be an Acid, that kills the Spirits: for while it stops and coagulates the Blood, the Motion of the Blood to the Brain is intercepted, and so consequently the Motion of the Animal Spirits is hindered, which is the original of the Disease. And we are confirmed in this Opinion, because we have opened some, who died of an Apoplexy, and we found Blood perfectly coagulated in the Vessels; yea, we observed *polypi* in the Heart, and Concretions and Evulsions of Blood, but chiefly in the Brain. Wherefore most, not to say all, of us hold, That such as die of Apoplexies, have Blood coagulated in the Vessels, or extravasated in the Brain, which a couple of famous Anatomists, *Wesperus* and *Fracassatus*, do confirm, who observe, That the Vessels of the Lungs were burst by the stoppage of the Motion of the Blood, and an Evulsion ensuing upon the Acrimony of the Acid. Which very thing I observed in a Citizen of ours, who, because he was so Corpulent, and the Parts so fat, that they could not receive the Blood, fell first into a Palsy, and then died of an Apoplexy. Wherefore, as *Hippocrates* says, Fat men rarely arrive at many years: for it is certain that such die sooner than lean People; because they are often exposed (not to mention other Mischiefs) to the Palsy, or to be strangled on a sudden. or to a mortal Apoplexy; as those two instances in *Timaeus* l. 6. c. 2. sufficiently confirm. Therefore (to return to our business) Bleeding

Bleeding in all Ages is our chief and last refuge, which the great *Celsus* confirms, when he says, *Bleeding in an Apoplexy either Cures or Kills*. Secondly, The Brain is sometimes over-flowed and drowned by a viscid and crude Chyle, not rightly assimilated to the Blood, or by *serum* or Phlegm, that is, coagulated *serum*, if they stagnate. *Platerus* saw such an Apoplectic Woman, the substance of whose Brain, when opened, was dissolved like Cream, and ran down her Face. And from this Principle an Apoplexy must be either sanguine or pituitous, which distinction if neglected, the Physician must needs mistake. Thirdly, There is nothing more dangerous, than a foetid Narcotick Sulphur, which the Chymists call a *wild Gas*; this is drawn in with the Breath out of the Air, and fixes the Animal Spirits, and checks the Motion and Fermentation of the Blood. I could produce several things more; but let it suffice to tell you, That an Apoplexy may arise from a Blow, Compression of the origination of the Nerves, whatsoever causes it, from cutting the large Nerves asunder, from Fear, and such-like Causes.

S. II. Prognostick.

NOW we have explained the Causes of the Disease, it remains therefore that we spend some time in explaining the Prognostick Signs. For by means of the Prognostick a Physician is enabled to vindicate himself and his Art from the petulant Calumnies of the vulgar. First of all, it must be observed that Old Men are most subject to this Disease, as also they are, who are often overcome with deep

Sleep, who have a heaviness in the Head, an unusual laziness, swollen Eyes, such as have a darkness come over their Eyes, and such as have a slender Neck.

Now we may best measure the greatness of the Disease and danger, by the greatness of the Breath for in a violent Apoplexy Breath is so far gone, that it scarce be perceived; or it is rattling in the Throat, like a People; and breathing is really the most necessary of all the Animal Functions; for when it is gone, Life is gone. Therefore no Physician be so fool-hardy to boast that he can Cure an Apoplexy, especially a strong one, let him despair presently, he can do all things, which may clear a passage for the Animal Spirits, let him not neglect his Patient in a milder and less degree of Apoplexy may be cured, for I, and several others have cured such cases, besides what I have said, we have these golden Sayings of the *Hippocrates*, to this purpose, *to cure a violent Apoplexy is not possible, and to cure a slight one is not easie. They that have their Gangrened, perish within three days, but if they outlive them, they recover*. And in another place, *Apoplexy arising on a sudden, with a Fever coming upon it, is mortal*. In a strong Apoplexy, when all the Animal Faculties are sunk, if there is a rattle in the Throat continually, there can be no recovery. Amongst the Signs is one, If in Apoplectic Patients Sweat break out upon the Face, it betokens Death; on the contrary, If in such a Patient the Sweat never be violent, and not so copious (which before) it makes some Paralytick.

If the Hemorrhoids happen to Apoplectic People it is a good Sign, but if Coldness and Numbness it is a bad one. According to *Avicen*, all bleeding at the Nose and Ears in Diseases of the Head, is curative and profitable. That difficulty of Breathing in a violent Apoplexy, with an unequal and intermitting Pulse, does preface present Death, *Hippocrates* teaches, Experience confirms, and Reason dictates: Because in such a Case the Enemy has got deeper rooting, and is therefore more hard to be expell'd.

Sometimes a Man relapsés into an Apoplexy, or it seizes him after such a certain Time. The Reason of which is, because when the Vessels are once open, they cannot easily be re-closed, which sometimes occasions the Humor to be extravasated again.

A rattling and loud Respiration is often Mortal, but not always; for we find the contrary in one who is taken with a rattling and difficulty of Breathing a whole day together, and altho the Distemper turned into a Palsy of one Side, yet the Patient recovered; but so, as that he was suddenly taken off by the same Apoplexy in the Night-time six Months after. Tho few recover in this Disease, yet those who do, commonly fall into a Distemper of long Continuance, as a Palsy of one Side, and now and then the whole Body. They often lose their Memory to that degree, that they cannot remember the last Thing, and grow mere Children again. Salivation often cures an Apoplexy, as we have seen an Apoplectic Woman, who for a Year more, did every day spit more than half a Pound of Moisture, just like Infants breeding

Teeth, which when it ceased, she dy'd immediately.

In Winter when cold Winds blow, and the Skies are very cloudy, this Distemper is wont to be most violent, dividing and tearing asunder the Carotid and Cervical Arteries, from whence an incurable Apoplexy arises. The Case is the same if the Spinal Marrow be cut in two. It is commonly a Sign of Death, if by strong Sternutatories the Patient does neither sneeze, nor is sensible.

§. 12. *Dietetic Cure.*

THUS much of the *Prognostic*, now we pass to the *Dietetic Cure*, which consists in the six Non-Naturals.

Choose a hot and clear *Air*; on the contrary, avoid that which is rainy, cloudy, cold, &c.

The *Meat* must be hot, sparing, easie of Concoction, and which will be soon distributed, such as Chickens, Hens, Capons, and the like, especially Broths. With all their Meats let them use Aromatics, as Time, Rosemary, Marjoram, Sage, Hyssop, Grains of Paradise, Mace, &c.

The *Drink*, according to the Ancients, must be Mead, or rather, according to the Moderns, *Mosel* Wine, and in Germany *Michelback* Wine; in which may be infused *China-Root*, and it may be diluted with Spaw-Water, or with any other Cephalic Decoction. But let the Sick Person abstain from pure Wine, and that which is strong, especially Spirit of Wine, and other Opiates impregnated with a Narcotic Sulphur. For they that Drink too heartily of such Liquors, suffer for it by an Apoplexy.

Instead

Instead of *Exercise* let the extreme Parts be violently rub'd. Let Cupping-Glasses be applied to the Shoulders, and Urtications, or stinging with Nettles ordered. And let the Sick Persons be carried in a convenient hanging Bed, or in a Chariot.

Sleep and *Watching* must not exceed their due Bounds.

Let the *Belly* be kept Laxative, that the Enemy may be turned out.

As to the *Passions of the Mind*, let the Sick Person behave himself like a Man, and be free from the more grievous ones; as Anger, Sorrow or Fear, Fright, and the rest. And therefore let them that are prone to this Disease, most of all avoid any Blow upon the Head, or even any slight stumble.

§. 13. *Pharmaceutic Cure.*

HAVING took a superficial View of the *Dietetic*, we now proceed to the *Pharmaceutic Cure*; and first according to the old *Galenists* Way, who lay the Blame either upon the Humors or too many Vapors, which they therefore endeavor to carry off with the following Evacuators. Such as are *Electuarium Indum majus*, Trochiscs of *Agaric*, *Pilula sœtida*, *Cochia*, *de fumo terræ*, *Arabica*, *de lapide Lazuli*, *Hiera picra Logadii*. They also preposterously advise Vomitories rather in the Progress of the Disease than in the Beginning, and as it were, ride backward. Sharp Clysters they use upon every Occasion. When the Sick Person is a little come to himself, and begins to speak and gets Strength, they use the foresaid Purgatives, beginning with the more gentle ones, as, suppose, Clysters.

But they scarce ever preparing Medicaments, in this violent Disease has no remission, but they give them to the Declension. In a Plethora they order Venesection, as not to take away too much at once, but by Degrees, repeat it so often as Occasion requires. Their Averters are, Clysters of Betony, Sage, Hyssop, joram, Rue, Centory, Penny-royal, Leaves of Basil, Seeds of Fenel, Anise, Cardus, *Hiera picra*, Polypody, adding a little Salt of Rue. They also refer hither Suppositories of Honey with or without *ra picra*, and likewise hard fro with a rough Cloth, striking about the Neck where there are abundance of Veins and Arteries, Vellications of the Hair of the Beard and Pubes, Cataplasms to the Loins, Shoulders, and other places of the irregular Veins and inferior Parts with Scarification, Leeches to the foresaid Places and also Hemorrhoid Veins. Divers Rhins and Gargarisms, the Use of which may be seen among many Practitioners, for it is a common recite Things that are not well known. Hither also do Sternutatories of Castor, Pellitory of Spain, Euphorbia (which is said to cause Spasms most powerfully, and Purge the Brain by the Nostrils.) Apophlegmarism of the Sinapism of Mustard-Seed well boiled in Water to the Face Plaster.

Their Exciters and Stimulants of the Faculty of the Brain, they say is laid asleep, are Pills of *Galbanum*, Castor, Opium, Unguents prepared of the

§. 14.

Paracelsus makes a two-fold Cure, *Internal* and *External*. The *Internal* he says is performed by Corroboration, by the Essence of strengthening Minerals, that is, by the highest and greatest Confortatives, which dispel the Mists and Clouds out of the Heaven of the Microcosm, and bring back the Sun which enlightens the Spirits and all the Elements, and makes them purer and clearer. For this purpose he extols Pearls, Stones, Gold, Gems, Coral, Emerald, Jacynth, &c. But he prefers his *Mercurius solis* before all other Things against the *Gutta*, and its *Species*. But the *External* Cure he performs by Balsoms, which do their work by cherishing and repairing what the *Gutta* has taken away.

§. 15.

But omitting these Things, let us pass on to *Helmont*, who prefers Vomitories before any thing else, especially if his *Ens potestativum*, which resides in the Stomach, shock the Soul. Therefore, says he, a Vomit of white Vitriol given about the Beginning, cures a new Apoplexy. After that volatil Salts of Stomachic and Cephalic Aromatics do the whole Business, as of Cinnamon, Lavender, Marjoram, &c.

§. 16.

Willis's Therapeutic Method is either Curative or Preservative. Now he that is at other times strong, is, in the Fit, to be kept out of Bed, but he that

ed hot warming-Pan held some distance from the Head, but the Hair must be first shav'd off, for they think the gross and pituitous Humors will by this Means be easily attenuated, like as the Sun melted the waxen Wings of *Dadalm* (if it may be allowed to illustrate one by another.) They put into the Mouth and besmear the Nostrils with Mustard-Seed beat small, mixt with Salt, and macerated in *Aqua Vita*.

Corroborators bring up the File, which by them are accounted as specifics; such as, *Aurea Alexandrina*, *Anacardina*, *Mithridate*, *Diacolum dulce*, *Diacorum*, *Diamonium*, *Acorus* preserv'd, Conserve of Betony, Marjoram, *Acorus*, &c.

They affirm that *Aqua Vita* in which some of the foresaid Things have been macerated, and Nutmeg, and Castor (which they say is very efficacious in this Case) also the Root of *Acorus*, Sage are of great use. Sprinkling and Washing the head shaven with Oil or Water, in which have been boiled Flowers of *Stechin*, Leaves of *Origannum*, Bay-rose, Rosemary, Sage, Chamomil, Lilot, Penny-royal, Savory, Nutmeg, and Rue, &c. are conveyed.

They commend a rubifying Veterinary Plaster of Oyl of *Euphorbia*, Castor, Mustard-Seed and *Opoponum*, as also they highly extol the Unguent of Castor and its *Aqua Vita*, and Oil of Lilies, *Per-de-Luce*, Nard, Rue, Spike, Nutmeg. They say that Bathing is not convenient till the Patient has got three Weeks over, after which they advise it.

is weakly, in his Bed, with his Head pretty high, and forthwith he must be let Blood, after that there must be injected a sharp Clyster, in which may be dissolved *Species Hieræ Diacolocynth.* and an Infusion of *Crocus Metallorum.* Let a large Vesicatory be laid to the Nape of the Neck, and others to the Thighs, and drawing Cataplasms to the Feet. Let the Temples and Nostrils be anointed either with Oils, or Apoplectic and Aromatic Balsoms, and all the Members rub'd so hard as to cause Pain. Also all such Things must be used inwardly as are powerful in rousing up the sleepy Animal Spirits, such as are all volatil Salts, as Salt of Harts-horn, Amber, Mans-Blood; Spirit of Harts-horn, Soot, and the like, which may be now and then given in a Cephalic Julap. After these Things let the Patient take a Vomit of Salt of Vitriol, or an Infusion of *Crocus Metallorum.* Vomiting being over, the foresaid excellent Author flies to Strengtheners, such as are *Elixir vitæ Quercetani*, Spirit of Lavender, Treacle, Camphore, Tincture of Amber, Coral, which may be administered in a convenient Dose in Apoplectic Water. He says that Cupping-Glasses must be applied to the Shoulder-blades and Neck, and that the Spirit of *Sal Armoniac*, or a Suffumigation of *Galbanum* boiled in the sharpest Vinegar must be held to the Nostrils, and that Er-rhins, Apophlegmatisms, and a Purge of *Pilula Rhodii* are not to be neglected. If these Endeavours be not available, he orders a red hot Iron to be holden, at some Distance, to the top of the Head when shaven. The Fore-head and fore-Part of the Head must be fo-

mented with *Acetum Beroniarum* and Leeches must be set on the Temples and behind the Ears.

This Author's *Preservatory* method is as follows. At the Spring and Fall, and each Solstice, he advises Purging and Bleeding; that altering Cephalicks may now and then taken as occassions requires, amongst which he recommends *Spiritus Salis Armoniaci succinatus*, *Coralliatus*, or impregnated with Castor or Man's Skull, or Elix Peony and Tincture of Amber, given to drink in Water either Lavender, or Rosemary, or Cherries. He also bids his Patient drink the Decoction of *Coffea* every Morning, and Drinks as these he frequently uses. I am not willing to say any further, seeing that the best Things are mentioned already, and such as I my self have been successful by Experience.

§. 17.

Sylvius dissenting from the common the business of Vomits, will allow any to be given; saying since a Vomiting cannot be cured unless the animal Motion of the *Diaphragma*, especially of the Muscles of the *Abdomen*, do assist, is quite abolished in an Apoplexy, therefore nothing can be expected from Vomits, but a vain Expectation, and, it may be, some ill Effect on that: But if the Disease proceed from a *Narcosis*, or drinking too much Wine, in that Case he will admit it. To draw the Blood to another place, he thinks of all convenient to bleed the Patient either in the Foot or Arm, till the Blood stick in the Brain, and

ly extravasated there, he per-
des the Use of Apophlegma-
s to draw it gently to the Palate
Nostrils. But he thinks that
oppressed Animal Spirits should
refreshed with Spirituous Things,
specially if the Apoplexy be cau-
by a Picituous Humor, in which
also he advises Errhines, Ster-
tories, which, he saith, may ve-
well be prepared of Marjoram,
Flowers of Lily of the Valley,
Sow-bread, wild Cucumbers,
Tobacco, Cubebs, Mustard-
-c.

his Author commends sharp
pers, such as *Euphorbium* and
mony, but with great Caution,
ly extolling Serons, Cupping-
es with Scarification, Vesica-
s behind the Ears, Venesection,
that the vital Flame should be
eated in the Heart, from whence
th in Apoplexticks does neces-
y ensue. But in old Men he or-
bloody Scarifying instead of
ed-letting.

he for-said ingenious Author
es no Account of Plucking the
s, Pinching the Fingers, shaking
Body, Frictions and Ligatures.
the contrary, he saith, that all
maricks are convenient. But
to be tedious :

§. 18.

WE pass on to the Carte-
sian Pathologists, who
ing upon their mechanic Prin-
es, endeavour with all their
at to remove the Obstructions
the small capillary Vessels and the
le Brain, and that those little
s may be cleansed from the pee-
Matter. To this End, if the A-
plexy proceeds from Blood, they
se to let Blood freely, but if

from Phlegm more sparingly. They
allow of Frictions with hot Cloths,
and Spirituous Things; for by this
means they do not doubt, but that
the Animal Spirits may be rouzed
up, and also that thereby the Mat-
ter sticking in those small Vessels
may be more easily discharged.
They would have stinking Things to
be held and put into the Nose,
bright Things to the Eyes, and vo-
latil Salts to the Mouth. They
prove by Reason, that gentle Cly-
sters should be given in the be-
ginning, and sharper presently
after.

About the beginning of the Di-
sease they order an Emetic or
strong Cathartic, but do not ad-
mit of Salivation by Mercury, be-
cause it may cause the peccant
Matter to flow more copiously into
the Brain.

If the Sick Person be raised with
the Use of these, we must proceed
further to such Things as open Ob-
structions and Strengthen, as the
Cephalic, Specific, Salts and Spirits
of Amber and Urin, not neglecting
in the mean Time to use Spirituous
Things externally, because they
convey much Coelestial Matter in-
to the Head.

§. 19.

THUS far of the Opinion of others
in subduing this Disease, now
we will give our Own Advice, as
we have found by our own Expe-
rience. Wherever therefore the
Enemy be lodged, he is to be ex-
pelled by a Vomit. For let *Sylvius*
say what he will, Vomits have been
found by Experience to do a great
deal of good. To this purpose
these following need no Commenda-
tion, *Tartarus Emeticus*; *Oxyfac-*
chaturus

charum, Emeticum à D. Ludovic. correctum, Aqua Rulandi, Vitriolum album, &c. Or,

Take *Syr. Emet.* six Drachms, Cinnamon-Water an Ounce. Mix them for one Dose.

With these Things very often the Enemy is overcome, for as the old Proverb says, *A desperate Disease requires a desperate Cure.* But respect must always be had to the Patient's Strength, as well in this, as in all other Cases, which *Platerus* and *Hoferus* caution as well as we.

If this desperate Enemy hath invaded the Mass of Blood, he is to be ejected by Venesection, which we admit of in every Apoplexy, and in all Ages, yea in extreme old Age. To the timorous we grant, instead of Blood-letting, Leeches, or Cupping-Glasses with Scarification.

Sharp Clysters may also be used.
Ex. gr.

Take of Rue, Rosemary, *Origanum*, Leaves of *Asarum* of each one handful, Flowers of Arabian *Stæchas*, Centory the less, Lily of the Valley of each one handful, Root of *Aristolochia rot.* one Ounce, Master-wort, Pellitory of Spain of each half an Ounce, *Carthamum*-Seed ty'd in a Rag two Drachms. Boil them in common Water. In one Pound of the Colature, dissolve of the Electuary of *Hiera picra* with Agarick one Ounce, Gall of a Bull one Drachm, Essence of Sage, Rosemary of each two Scruples, *Mel anthos.* one Ounce. Mix them, and make a Clyster.

To this End also we may use Suppositories. *Ex. gr.*

Take of the Gall of a Bull Juice of Rue each one Centory the less half a Salt of Rue one Scruple a sufficient quantity of *fat.* Make a Suppository according to Art.

Afterward, that the Enemy be quite routed, and the Patient's Weapons turned, we advise the use of Spirituous Things, which are all Apoplectic Waters, sweet and Odoriferous. All Salts, as well of Vegetable Animals and Minerals. All Vegetables are Cephalic Herbs, divers Aromaticks, and the most subtil Spirits. From the Rarities of such Things may be made volatile, as Harts-horn, and Bone of a Man, Man's Blood, the volatile Spirit and their Salt. Of the Minerals these Things are proper. *Liquor Cornu Cervi Succinum Sura Auri Claudi.* But of all commendable saline Spirits; as the Spirit of Soda, the Virtues of it were better known, we should not need to search for the Indies. For the young Practitioners, I will leave a Prescription or two.

Take *Spec. contra Apoplexiam* Drachm, *Sal volatil.* Six Grains, Amber-grise five Mix them, and make a Clyster for three Doses to be given an Apoplectic Water, which follows.

Take of Water of Lily of the Valley, Mint of each an Ounce an half. Spirit of black

Of an Ounce, *Liquor Cornu Cerevisie*, three Drachms, distilled Oil of Buck-Thorn one Ounce. Mix them to give by Spoonfuls.

Take of Salt of Harts-horn, of each one Drachm, Madder of Amber half a Drachm, *Still. anthos.* six Grains, of Lavender five Grains, of Amber Grains, white Sugar three Ounces. Mix them. Of this Apopleptic Powder half a Drachm may be took twice a Day.

Alkali's do also far excellents, being both convenient for taking the Acid, and dulling its Force. We also highly value a Decoction of the Seeds of Mustard, and Garden-Cress which mixed with a volatil Salt. And Spirit of Lily of the Valley, black Cherries impregnated with the volatile Salt of Harts-horn and a little more by reiterated Cohobation.

We also upon our own Experience commend volatil oily Spirits as that great Medicine of Meibius, to wit, his *Sal volatile*.

Apopleptic Spirit of *Meibius* great Virtue:

Take of the Flowers of the Lily of the Valley six Pounds, Cinnamon one Pound, Zedoary half a Pound, Iron one Ounce, Mace, Cloves of each half an Ounce. Digest in a Month in a sufficient Quantity of Spanish Wine, afterwards destil them *per Vesicam*.

Take of the Root of Valerian, Swallow-wort, Peony of each one Ounce, Leaves of Baum, Oak of

Jerusalem, Rosemary of each three Handfuls, Flowers of the Line-Tree six Handfuls, Lavender, Spike, Sage, Time of each one Handful. Let them steep in the Spirit above-prescribed for a Month in a Vessel well closed. Destil them *per Vesicam*. Add of Spanish Wine as much as needs. Last of all rectifie it in a Bath, with Amber, Mosch and Camphore.

Those Things which young Practitioners ought always to have in readines, are the following;

Take of *Aq. apoplectica, cephal. nostr.* of each an Ounce and a half, *Hirund. cum Castor.* half an Ounce. *Sal. volat. oleos.* half a Drachm, Spirit of Lily of the Valleys a Scruple, Syrup of Buck-Thorn six Drachms. Mix them and give it by a Spoonful at a Time. Or, Take *Aq. Epilept. Lang.* one Ounce, black Cherries, Flowers of the Line Tree of each two Ounces, Spirit of Lily of the Valley one Drachm, Syrup of Clove-gilly-Flowers half an Ounce. Mix them. Or, Take of Water of Baum with Wine, black Cherries, Lavender, Lily of the Valley of each one Ounce, apopleptic Water six Drachms, Spirit of Lily of the Valley, Cherries, Mother of Time of each one Drachm, Syrup of Primroses or Clove-gilly-Flowers half an Ounce. Mix them. Or, Take the Epileptic Spirit of an Elk's Hoof half a Drachm, the volatil Salt of Man's Skull, Amber of each five Grains, Tincture of Castor half a Scruple. Essence of Amber six Drops, Water of Rosemary three Ounces, Syrup

of *Stæchas* two Drachms. Mix them for twice taking. This may be available both to preserve, and cure in the Fit and out of it. Or,

Take *Spiritus Vin. diaphoret. Helmontii* half a Drachm, *Aq. apoplectica* an Ounce. Mix them for two Doses. Or, Take of the Spirit of Man's Blood, *Spiritus apoplectic. Myns. Aq. magnanimitat.* of each one Drachm. Mix them. The Dose is fifteen Drops.

Universals being premis'd, the the Essence of the Woods is mightily commended, a Drachm of which may be given twice a day, also *Mynsichi's* Infusion of *Sallastras*.

Also if you cohobate the Spirit of Cherries upon Vitriol, you will have a potent Remedy against this Dislemper.

Cinnabar of Antimony and Mineral Cinnabar is also a great Remedy in this Disease, But if these last Medicaments produce a Fever, you need not be afraid, for it is a certain Sign of Recovery, if they cause a warm and moderate Sweat. For then you may give the Patient joy of his Health.

If *Serum* abound in too great Quantity, then purging is necessary to carry it off. Also Vescicatories must be applied to the Nape of the Neck and the Wrist. Likewise let the following Sternutatories be snuffed up the Nose.

Take of *Sal Vitrioli* one Drachm, Water of Marjoram one Ounce, Spirit of Lily of the Valley one Drachm. Mix it.

Also the following Mixture may be put in a Glass with a strait Neck.

Take of the Spirit of Volatilis, Volatil Sal of each two Drachms, horn, Soot of each one Drachm, Tincture of Castor half a Drachm. Mix them.

Or, let this which follows be put into the Nose.

Take of the Oil of Luce, Tabaco of each one Drachm, distilled Oil of Marjoram six Drops. Or, Take of the Pomellum of the Lily of the Valley one Drachm, and With a sufficient Quantity of Oil of Tabaco and Marjoram a Liniment. Or, Take Juice of Betes, Pimpernel, and Marjoram of each one Ounce half. Mix them.

Or, Let the Nostrils, and top of the Head be bathed with rich, spirituous and odorous Oils. *Ex. Gr.*

Take of *Balsam. Apoplectic. Lignum rhodium* of each one Drachm, and an half. Mix them in a Box. Or, Take Balsam of Marjoram, and Oil of Marjoram of each half a Drachm. Mix them.

Let the sick persons be bathed with Oil of Massich, Root of Orrice, or Nutmeg.

We saw an Apoplectic brought to speak again of Castor and Mother of Pearl. That which follows is good.

Take *Extract. Theriacal.* of each one Scruple, Spirit

the Valleys, black Cherries of half a Scruple. Mix them let the Tongue be anointed with. Or, Take of Treacle one Drachm, *Confect. anacardii*, two Scruples, Essence of Treacle one Scruple. Mix them and anoint the Tongue.

This Distemper proceed from an unreasonable Use of narcotick Drugs, you may give a Vomit, that put Castor in all your Medicaments, and rather, chuse such Things as are spirituous and volatile than saline. For spirituous Things do take away the Impressions that are already made by narcotick Spirits, as they do preserve from their Impression.

As long as the Fit lasts, let the Patient be what it will, you must insert sharp Clysters of *Elect. hieracii*, Oil of Rue, adding *Alumen* and *Sal gem.* You may add, to make it pierce the better, Essence of Sage, Rosemary, and of the Valleys.

You may also rub the Soles of the Feet with Vinegar and Salt; and all these Medicaments do no harm, but a fatal rattling seizes the Patient, in this Extremity we fly to the Remedy, according to these

*in morbosos sanant medicamina,
ferrum
ripe, sin frustra, pharmaca ignis erit.
iani possunt agris adferre salutem,
phryoniadis robur inane cadet.*

am for actual Cauteries which operate very potently, amongst which Moxa excels all other, for

if it be applied to the top of the Head, it is often a present Remedy; as also an Infusion of saline volatile Liquors into the Veins of sick Persons, for thereby the congeal'd and stagnating Blood is more easily dissolved. This is very much commended by *Etmullerus* my very good Friend, and *Claudius de la Courvée*.

The back Bone is to be anointed with divers spirituous Things, and other aromatick Liniments. For the sake of young Practitioners we set down the following Liniments, which may be used to the Back, Neck, and other Parts of the Body.

Take of the Oil of Bay-Tree an Ounce and an half, Amber two Drachms, Harts-horn one Drachm, Lavender half a Drachm, *Axangia Castoris* one Scruple. Mix them and make a Liniment.

But if the sick Person have an Aversion to fat things, you may use this which follows,

Take of *Spirit. convulsiv n. d.* one Ounce, of Ants one Drachm, Harts-horn, Tincture of Castor of each half a Drachm, Mix them. Or, Take of Water of Baum with Wine, Lily of the Valley with Wine, *Aq. apoplectica* of each an Ounce and an half, Spirit of Lily of the Valley one Drachm, Vinegar of Rue as much as is sufficient. Mix them. Or, Take of *Spirit. convulsivus nostr.* one Ounce, *Essent. ad membra* one Drachm, Water of Sage, Betony, St. John's-wort of each half an Ounce. Mix them. Or, Take of Spirit of black Cherries, *Aq. apoplectica* of each an Ounce,

Oyl of Amber ha'f a Drachm.
Mix them, and anoint the Back
bone therewith.

For prevention sake Spirit of
black Cherries, and Vitriol poured
upon calcin'd Gold, and several
Times cohobated, is good, if three
Ounces be took by a Spoonful at a
Time.

We add this as a Conclusion,
That the sick person may wear a
Cap lined with a Wolf's Skin,
which we have known many Prin-
ces to have used for Preservation,
but with what Success we know not.

Neither are quilted Caps
Aromaticks to be
Ex. gr.

Take of the Leaves of
Penny-royal, Baum of
handfuls, Amber three
Juniper-berries two Drachms
an half, Flowers of Rose
momil three handfuls,
Baum, Primrose, Aromatics
chas of each two handfuls
vings of *Rhodum* three
Benzoin, *Storax calama*
one Drachm, Mosch three
Mix them.

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CHAP. XI.

Of a Palsy.

§. I.

is not for nothing, that we subjoyn a Palsy to an Apoplexy, use a Palsy for the most part as an Apoplexy, when Sense and Motion return. If you would see its Etymology, it comes of the Greek Preposition *παρά* & *λύσις* to loose. It is called *morum resolutio*, a resolution of the *mor*; by Paracelsus, *contractura*; *Platerus, particularis Apoplexia*, a particular Apoplexy. It is described as a privation or abolition of Sense and Motion, either in the Body (which is rare) or in some parts, depending upon the relaxation of the *mor* Parts; and the animal *mor*, by reason of the obstruction of one or other Trunk of the spinal Marrow: For the spinal Marrow (as this description may the better be explained) is distributed into two Branches; if therefore, the *mor* Matter insinuate it self into the spinal Marrow, so as to obstruct both Branches, then they

think a total Palsy does arise; but if one Branch only be obstructed, then a Palsy arises either in the right or left Side. And we make no Question, but a Palsy may come in the Jaw, Tongue, Eyes, Feet, Hands, Arms, Fingers, Lips, Eyelids, *Sphincter ani*, Bladder and Neck, (which is confirmed by the German *Ephemerides Ann. 3. obs. 334.*) since we daily see that this or that part is deprived of Sense and Motion, and no Man will deny, that it may so happen, that any part may be deprived of Sense, the Motion unhurt; and on the contrary, it may be deprived only of Motion, the Sense remaining entire. Now and then also it happens, that neither Sense nor Motion are wholly taken away, but they only are dull and stupid: and then we say, this part labours only of an imperfect Palsy; yet, so as that it is sometimes a fore-runner of a true Palsy. Wherefore, a Palsy is reckoned to be twofold, a bastard and true. It is called a true

one, when the part neither moves nor feels; a ballard Palsy, when it only feels and does not move, or when it only moves and does not feel: And this is because of the more or less Influx of animal Spirits into the Nerves, and into their Tubes or Pores.

Motion remains and Sense is dull in that sort, which we call the Sleep of the Limbs, where the Motion remains, but the Sense is in some measure diminished, and sometimes depraved; for they feel, as it were pricking of Needles; and this arises, because by the inconvenient posture of the Limb, the Nerves and Arteries are compressed, so that the Humors move not into the Tubes of the parts, which therefore; remain empty. Wherefore, when the Limb is altered in its posture and stirred; presently the Spirits flow through the Nerves and empty Tubes, which, because they are sharp, they by run in; up and down, and pricking the Fibres of the Nerves give that Sense of pricking, as it were with Needles; but it is quickly mended; because the Humors presently run into the Tubes and fill them. By the Definition here laid down it appears how, and by what bounds, this Disease is parted from such as border upon it

§. 2. Difference.

A Palsy according to Practitioners, differs from an *Apoplexy* and *Numbness* in degrees: therefore it is called by some a particular *Apoplexy*. For an *Apoplexy* afflicts the whole, and often kills. A *Palsy* takes some one part. But a *Numbness* is a Sense of Pricking, and is an Abolition, not so much of Motion,

on, as of Sense, or rather Abolition of them; and this is the fore-runner of a Palsy. To contend, That Abolition of Motion is required to the Nature of a perfect Palsy, this Cause therefore, Impaired Motion differs from a true Palsy, as a thing taken in a large Sense, one in a strict. I shall say no more, but it is only the opinion, In regard of the matter that is said to be universal, the whole Body, except the head, is seized, and then the head of the spinal Marrow is the first to be affected: But if one side of the spinal Marrow be affected, it is called an *Hemiplegia*.

An universal Palsy is a great rarity; yet six Years since I saw one in a Woman at Limoges, it is called *Paraplegia*, if less than on both sides be hurt. It is called old and confirmed, if scarce admits of Cure; or new, if not confirmed, which, though it do not easily admit of a Cure, oftentimes, by applying proper Remedies, Health is restored. I would be tedious to recite the differences in regard of the Causes, which the curious Reader may himself find out by the Definition of Causes.

§. 3. Part affected.

ACCORDING to the Opinion of the Ancients, in an universal Palsy, the beginning of the disease is in the spinal Marrow, to wit, the primary source of all the Nerves, is mostly affected, in which the Nerves do differ little from the Marrow, since several Organs are necessary to animal Motion, it is worth inquiry, Which of them are

seemed the principal Part. All the Might and Main for the Nerves: when a Palsy of the one side or the other happens, then the Nerves of that side (which are separated, the right from the left by a Membrane) are hurt. And so accordingly as there is an Obstruction of the Nerves on the right or left side, on both, so the Hurt of that side necessarily follow. Willis describes the *Corpora striata*, the *Medulla oblongata*, and the Nerves for the part affected: For according to him these Bodies perform the Functions belonging to Sense and Motion; and sometimes some determinate part of the Body wants Sense or Motion, because according to the Author's opinion a Nerve is dissolved, from whence the decayed part otherwise received Sense and Motion. Wherefore, we ought with all Diligence to endeavour to know the Distribution of all the Nerves, and from what part of the spinal Marrow each has its Nerves, about which I have discoursed exactly and ingeniously. Syllius blames the Muscles, or Animal Spirits for the Sub-

Jartes, Famous for the Acuteness of his Invention, takes the Nerves, the Conduits of the Animal Spirits, for the Subject; for he, P. P. Artic. 7. Now it is known, That all these Motions of the Muscles, and that all Sense depends on the Nerves, that are like small Tubes or little Tubes, which arise from the Brain, and contain, as the Author does, a certain subtil Air or Spirit, which is express'd by the name of Animal Spirits. But how these Nerves and Animal Spirits serve for Motion and Sense, he adds in another Section, namely, That it is a continual Heat, implanted in our

Heart, which is a kind of Fire, and is the Author of all the Motion of our Limbs. Here might be an opportunity of adding several things more about Motion and Sense, according to the ingenious Author's Mind, how, while the Soul governs, the Muscles filled with the influent Spirits, are contracted, and draw the annexed Muscle with them. But our Business will not allow it, you may therefore consult the Author himself, *lib. de Passionibus animæ*.

We take the *Medulla oblongata* & *spinalis*, and the Nerves, and all these Tubes, that is, the Rulers of the Animal Spirits, for the principal Subject: for no other Vessels appear in Man's Body, which primarily convey these vivifick guests, beside that third sort of Vessels, the Nerves. Therefore we reckon the proximate Seat of this Disease, to be in the Nerves, they being primarily affected; and we, as all Anatomists do, distribute the spinal Marrow into two Branches, the right and the left; when the right is hurt, the Palsy is on the right side; and when the left is hurt, on the left. But for the adequate Subject, we take the Muscles, supported on every hand by Motive Fibres, which are deprived of Motion and Sense, not so much through their own fault, as of the Nerves inserted in them, that have suffered the like prejudice.

§. 4. Signs.

THIS Disease has no need of recommending up many Signs. Difficulty of Sense and Motion, because of the stopt influence of the Animal Spirits, frequent Numbness, with a Sense of pricking in the Limbs, *Vertigo* and a mist before the

the Eyes, show it is imminent ; sometimes thickness of Hearing precedes it ; but generally a Palsy follows an Apoplexy, as the Shadow does the Body : Oftentimes also it takes one unawares.

Now the pathognomonick Signs are plain enough, since no one can be ignorant, That that part has a Palsy, which is deprived of Sense and Motion : But besides, the part, when it is ill nourished, grows lean for want of Blood, loses its natural Heat and Colour, and becomes cold and flabby to the Touch. In a Palsy, a sudden loosning of some part is caused, so that the Patient can move neither Hand nor Foot on that side. Sometimes a Swelling may be observed in Paralyticks, and a Contraction of the Fingers, that is, while some Sense is yet remaining. If the paralytick Part be lifted up, it falls back again by its weight, and easily grows cold. Hereupon, the Muscles being loosned, and unable to agitate the Blood that is brought to them, the Blood stagnates, and being destitute of light, ceases to be spirituous, and grows rapid. The Urine is generally white and thin. The Side that is taken with the Palsy is often cold, and the other hot ; also the Eye, Mouth and Lip of the Side affected, are contracted, and drawn on one side. If the Jaw or any part of the Face be Paralytick, it is drawn to the sound side. In this Disease, as we said before, the Sense is perished, the Motion entire ; sometime Motion is abolished, Sense surviving, and often both are lost ; that is, when the Disease is confirmed ; then the Pulse is languid, slow, little. Sometimes none. In a scorbutick Palsy especially these salvage, acid Particles are able to stop the Circulation, and by their

coldness to congeal the Blood to make it unfit for Motion. The Sphincter of the *Anus* and the *Uterus* be paralytick, then the Elements and Urine come away voluntarily. The other paralyticks of the Tongue, Lips, Lids, Eyes and Neck, are marked by the hurt Action, the counting of which we will not longer.

§. 5. Cause.

Now I will give you the Cause of these Diseases out of the principal Authors. In the *French Antiquity*, which derive the Cause from a cold and moist temperature, to wit, from Phlegm, a watery serous Excrement, by long tarrying grows thick, obstructs the Nerves. The Cause That a Nerve of the spinal Cord is sometimes obstructed, or compressed by an Apostem or Humor, but that it is most frequently caused by thin watry Humors rivied from the Brain, which insinuate themselves into the substance and Porosity of the Nerve, whence the Nerves being made soft, are loosened and relaxed, imbibe so much Moisture, that the Origination of the Nerves is so that the Passage of the Faculty is hindred, which is Original from the Brain, at its first Principle. They also say that this Disease is often caused by gross Vapors got into the Nerves, which often make so great a struction, that the Passage of Animal Spirits is hindred, upon the Nerves grow flaccid, as it were fall flat. This they endeavour to make out by several Reasons, which we shall

to mention, since the Books of
Galenists are full of them.

§. 6.

Dracelsus owns the Cause and
Generation of an Apoplexy
and a Palsy to be in a manner the
same: for he often confounds them,
and makes them only to differ in their
subject. And, so far as we are able
to guess, he blames Mercurial Va-
pors, carried into the Principle of
the Nerves, and into the Nerves
themselves, and talks of I know not
what *gutta*, that runs down the Bo-
dy. That Vapors are a Cause, he
proves by the weakly Limbs, shak-
ing, and oftentimes the Palsy of
oldsmiths, and such as make Look-
ing-Glasses; and likewise by other
Instances of such, as having filled
their Heads with the narcotick
steams of Wine, have fallen into
a Palsy for some days. Some of his
Disciples accuse the Tartar lying in the
Veins of Blood.

§. 7.

Helmont *Tr. de Lithiasi* c. 9. p.
160. §. 82. & 62. concludes,
that a Palsy is a Contracture of the
sensitive Parts, caused by Fear a-
nd (so he says) which has a pro-
pensity to shut the Pores immedi-
ately, especially if it be sudden:
therefore, he says, Women, who
are generally fearful, do often upon
a fright fall into a Palsy without
an Apoplexy. He therefore takes
the falling Flegm for a Cause, and
the Fear, which stirs up the Apo-
plectick Poyson, and so causes a
Contracture of the sensitive Parts.
In another place, he says, this Dis-
ease is caused, if the Parts be wa-
shed with a foreign and devious Spi-

rit. *L. spir. vit.* §. 9. But because
these things are obscure, I have no
mind to wrest them to my Sense.

§. 8.

Willis, that Famous Patho-
logist, blames the Obstruc-
tion of the Passages, and the im-
potency of the Animal Spirits for
the conjunct Cause of this Disease,
as they are either narcotically affect-
ed, or being small in quantity, do
not exert themselves briskly e-
nough: therefore in a general Pal-
sy (which often follows an Apo-
plexy or Lethargy, and other Dis-
eases, because of a Translation of
the morbifick Matter) the Animal
Spirits are hindred from their usu-
al Irradiation or Influx into the
nervous Kind, and so the Limbs
must of necessity flag. But accord-
ing to him, not only the Obstruc-
tion of the Nerves, the Porters of the
Animal Spirits, do offend in this
Disease, but the Obstruction also of
the *corpus striatum*, and sometimes
of the *Medulla oblongata*, and *spinalis*,
which if they be loosned, and the A-
nimal Spirits do not sufficiently irra-
diate, puff up, and by their vigor
actuate them; and it cannot other-
wise be, but the Parts must grow
flaccid, and a Palsy follow.

He makes the mediate morbifick
Causes to be not only oppilative,
but sometimes narcotick, which ex-
tinguish the Spirits. For he main-
tains, That some extraneous, and, as
it were, vitriolick Particles, admit-
ted within the Organs of Sense
and Motion, do close the Pores,
and deject the Animal Spirits, yea,
keep them from Motion, and cause
a Blasting as it were in Trees. He
proves, that this Disease is seldom
caused by mere Phlegm or Serous
Filtch,

Filth, because they that are of a moist Brain and Hydrocephalick, rarely fall into a Palsy.

§. 9.

Sylbius suspects, that this Disease arises either from want of Animal Spirits in the Muscles, or from straitness in the Passages, that is, of the Nerves, or from immobility of the Animal Spirits, caused by a Drowsiness and Stupidity. Among the more remote Causes he reckons a watry Moisture, which is able to make the Fibres of the Muscles soft and flaccid. And he adds, That all those things which can obstruct or straiten the Nerves, are apt to produce this Disease, among which he reckons Phlegm falling on the root of the spinal Marrow and causing either a *Paraplegia* or *Hemiplegia*. He holds, that Wounds and all other things that cut the Nerves, and all Narcoticks, which render the Animal Spirits torpid and immoveable, do contribute to it.

§. 10.

Cartes acknowledges the want or weakness of the Animal Spirits to be the immediate Cause of a Palsy, and after his way illustrates it by a mechanical Conception. He says, that the Animal Spirits puff up the Muscles, as Wind does Sails, which ceasing, the Sails slacken and flap. Therefore when the Animal Spirits are stoppt, or flow not in plentifully enough, a flagging and relaxation of the Nerves and Muscles must needs ensue, upon which Sense and Motion cease.

And so the patrons of the nervous Juice, think, that a Palsy arises from nothing, but the thick re-

crements of the nervous Juice obstructing the unseen passages of the Nerves. But they that will build upon a nervous Juice, build upon a tottering Foundation; concerning which in another place I shall more fully treat.

§. 11.

IT remains, now we have to consider the other Means, to produce a Palsy, in our own Opinion. And we reckon the Cause to be the stoppt Influx of Animal Spirits into their Conduits. These Spirits are the internal Nerves, and are very subtil, so that you may deservedly with reason call them

— *Divine particular* —

For they are the most subtil and sulphureous Particles of the living mixt Body, under a constant uninterrupted Contiguity and Contiguity, endued by GOD with a sensitive and operative Power, according to the Properties and Organization of the Body, which is their habit. For ALMIGHTY GOD is the first Mover. For as (the *Helmont's Words*) the moving spirits dart the vital Light, disperse the Nerves; they carry the pleasure of the Will, or Motion to the Muscles, the executive Organ of the Motion, the Soul arbitrarily proposed to. For the irradiative Light of the Spirits being intercepted, no motion but a Palsy is caused. *Bartholinus* firms this in *Anat. Reformat. Nervis* p. 454. And like the Sun by the interposition of a Cloud and the light of a Candle is deprived from us by the hand; so the Nerves, deprived of the light of the Animal Spirits, are deprived of Sense and Motion. For they are only porous, thorough

nothing but this light and most subtil parts can pass. As the Rays of the Sun can pass thorough Air and Water; so Dirt and Mud in water can hinder its shining clearly, as *Pergamenus l. 1. de Sympt. c. 3.* elegantly delivers himself, herein concurring with the Moderns. For we make no question, but this light is a subtil, moveable, volatil and active thing, whence it has the name of Spirit: Yet, that they are subtilly material, we gather from hence, Because they consist of saline and oily, or sulphureous Particles, and therefore of the most subtil and active ones: And then these Particles both in the Bodies, wherein they are contained, and drawn out of them by Art, and united with the Phlegm of the Air, or of their own Body also, are called Spirits. And this will appear more clearly, if one do but consider,

— *Halantium germina florum.*
ortenses pictura thoros, pastura ve-
nustis
eliciis oculos, & odorum flumine
mares.

For who dare deny, that these parts, which exhale from the flowers of Plants, are the active parts thereof, since even out of their body, which before they inhabited, they show so great Subtility and Activity, that one cannot imagine any thing to show more? Certainly they are nothing else, but the most subtil, saline-volatil Particles, flowing from the Animal Oyl of Plants, dissolved by fermentation, which being some way moved, affect our Nose in that manner, which we call Smell. For when this Oyl is taken away, Flow-breath Fragrancy no more.

And Oyls are nothing else, but volatil Salts, concentrated with the sulphureous and seminal Fatness by Circulation. But to our proper Business; just therefore, as the day is without Light, or the Air without Commotion; so is the Body without Spirits. All things grow lax, flaccid, and run to their own Destruction. Now this Flaccidness is from the Obstruction of the Nerves, because when the Nerves are obstructed, the Spirits do not freely flow into them, so as sufficiently to distend them; and therefore, the Tubes subsiding, the Nerves must needs grow flaccid. Let us a little examine the more proximate, mediate Causes, and we shall find either an Obstruction or Inundation, which either stops the Animal Spirits quite, or makes the nervous and muscular Fibres soft and flaccid. And this Obstruction and Inundation are made by a vicious Blood, or by a diluting Serum; for these, according as they offend in Quantity or Quality, or Motion, may raise a Palsy, and extravasated Blood especially falling upon the Pores of the Brain or Nerves is the Cause of this Disease, as we see daily in those, who become Paralytick after a Fall, where always in a manner Blood is found extravasated; concerning which you may see *obser. 65. Ephemerid. German. Ann.* 3. Oftentimes a serous Matter invades the Brain, and besets the Pores of the spinal Marrow, especially if the Serum (which is also called *Lympha*) be coagulated, and it is easily coagulated by an Acid; which coagulated *Lympha* is also called Phlegm, and is that useles viscid stuff in Man's Body, which is able to stop the Pores of the Nerves. But here we exclude no Acid,

Acid, coagulating Mercurial Humors, especially austere and bitter ones. And, if we give our Conception of these last, by *austere* Humors we mean obtusangular Particles; by *bitter* ones Particles more rectangular; and we may liken the bitter to a skreeking sharp Saw, and the austere to a blunt one. Such figured Particles may easily obstruct the passages of the Animal Spirits. Nor do we exclude tartareous and other sulphureous Impurities, discharged upon the *Spina dors*i and the origination of the Nerves, from obstructing the blind passages, which are the way of the Animal Spirits. For we all grant, if *Serum* fall within the spinal Marrow or *Vertebra's*, that by its weight the Nerves are compressed, and from thence an exclusion of the Animal Spirits, and an Abolition of Sense and Motion must of necessity follow: from whence we may see that cold does remotely contribute something, because it coagulates the *Serum*. So *Cummius* in *Ephem. Germ. Ann. 1. Obs. 84.* has observed, how two persons, who tarried too long in the Cold emptying a Well, were taken with a Palsy in all their lower Parts. For without all doubt the *Lympha* is encreased and coagulated by cold, and therefore we make no question, but it may make Men Paralytick. We read a History of this nature in *Galen*, of one that went too long wrapt up in a wet Cloak, who fell into a Palsy in his Arms, and of another that sat naked upon a cold Stone, who fell into a Palsy in his Legs. Besides, no one will deny, that *Serum* being heavy in Bulk, and preternatural in Quantity, may insinuate it self into the subtil Passages, and by stagnating there may grow tough, and so cause an Obstruction. And luxations of the

Limbs prove, That this Disease be caused by compression of Nerves, when, upon the Animal Spirits being stoppt, parts also labor of an Atrophy, which sort of Palsy *Wedelius* observed in *Ann. 2. Ephem. Germ.* to be caused by crookedness, if a Nerve is cut in sunder, a part that part must necessarily follow which the Nerve should direct the Animal Spirits; for so their passage is stoppt. Thus, a Nerve in an Arm being cut, that Finger was directed by it, will be observed an Immobility, Numbness both of the Arm and Hand, succeed upon venesection administered, which the *Germ. phemerides* also confirm. The *phemerides* also in *Ann. 2.* testifie, That a Palsy has been produced by Worms in the Arms and Legs; so no Man, who is never in Physick, can be ignorant that this Disease may be caused by a scorbutick Taint, that is, abundance of serous Humor, acid, bitter, pontick, saline and tartareous Dregs abounding over in the Blood, carried to the termination of the Nerves, or to the Nerves themselves. And there is no more pernicious, for spoiling the Animal Spirits, and making them flaccid, than Narcoticks, which the lucid Spirits, those nimble Guides of Motion.

And this Disease often arises from the Colick, to wit, by a transgression of the morbidick Matter of the Nerves: Which Colick derives from a bilious Intemperature; but how truly, I question for it seems to me, That bilious out Flegm joyned with it, doth hurt the Guts, because by its acidity and Acrimony it only

illcates the Guts; and rather opens than stops the Pores: But if there be Phlegm also, then by clinging close to the Guts, and insinuating it self into their Pores, it will produce a greater Mischief, by its continuance there, so that then the sick Pains may arise, which will not be removed by emollient ointers. And we have no great reason to be troubled concerning the passage of that Matter, which causes the Palsy and obstructs the final of some Nerve or other, it tends to the Limbs. For a good Man may see, That the Cause of this Evil lies about the membranes of the Mesentery, which has commerce with the spinal Marrow, and therefore may easily obstruct the Nerves, that come out of the spinal Marrow. For those Nerves, which are disseminated in the Plexus of the Abdomen in the Mesentery and Guts, have almost every where commerce with the Lumbar Nerves, as it were by a mutual inosculacion: And this we observe, That oftentimes a scorbutick matter lodged in these parts, obstructs the greater Nerves, and causes a Palsy on one side or the other. In every Palsy therefore the final of the Nerves should especially be observed; and for this reason should be diligent in Anatomy, that we may know the distribution of all the Nerves, and from whence they arise out of the spinal Marrow even to the place of the Nerve, lest it befall us, as it did some in Galen's time, who applied nervine Topicks to the Colicky Hand it self, which was not proper for the Spine: for the Nerve imparts Sense or Motion by means of the Animal Spirit to any part: that Nerve must necessarily be affected in the loss of Sense or Motion,

And thus we have endeavoured briefly to give you our guess, without pomp of words or scrupulous doubts: yet take notice of this, that sometimes truth lies in a thing incredible, and falsity in a thing likely to be true; And it is better to suppose these things from certain Tokens and Reasons, than to fly to the refuge of Occult Qualities, as several Physicians and Philosophers rashly do, who, when they are mistaken, turn the fault of their Judgment into a Complaint of the incertitude and difficulty of the thing. Therefore sometimes I had rather give a dubious Conjecture, whereby doubts may the more easily be cleared, than by rash assent adore another Man's unsound Opinion: for *Carneades* doubts, *Pyrrhus* deliberates, *Simonides* begs time. But now to the Prognostick.

§. 12.

THE Physician, who here makes his Prognostick not rashly, but according to *Hippocrates* his *Mind Proorrh. 5. 3. l. 5.* with great providence, acts most prudently; and therefore until he have duly weighed the strength of the Patient and of the Disease, he will say nothing positively about either Life or Death. In the *Interim*, we must take notice, it is a Disease very hard to cure, upon account of the peccant Matter, and also of the part affected, to wit, the spinal Marrow.

A perfect and confirmed Palsy is a Chronical Disease, and is not over in two or three days, but lasts more Months and Years, especially if it follow an Apoplexy. But that which comes from a scorbutick Taint, or from colick Pain, is more easily and sooner cured (*ceteris paribus*) than others.

others. A Palsy from the cutting of a Nerve in sunder is incurable, and also that which proceeds from a Fall, Contusion, Luxation and the like, is very dangerous, of which we had a Case in a Noble Maid, who lived in the Princess of Nassow, my most Serene Lady, her Court: She fell into a Palsy five years after a Luxation, which holds her to this day. But that which comes from an inundation of *Lympha*, may be cured by proper Remedies. A perfect and universal one is more difficult to cure than an imperfect and a particular one; for instance, of a Tongue, Finger, Leg, &c. A Palsy coming in Winter, and in Old Age, is scarce ever cured. It comes sometimes from a weak Apoplexy, and is in danger of turning to an Apoplexy again. If a Fever or Trembling supervene, it is commonly held to be a good sign: yet that Rule sometimes fails; for in a young Man, twenty six years of Age, at *Camberg* I observed a Trembling and Fever did concur in a Palsy, that followed an Apoplexy, and for all that he died. There is more hope if there be no Atrophy in the paralytick Part; which if there be it is a very bad sign, for it shows, That the Humors are either not carried to the part, or that they have obstructed the part, which obstruction it will be very difficult for the Physician to remove.

If some little Sense come again, if the Disease be agreeable to the Age, as the Divine *Hippocrates* reckons, if both the internal and external Senses be safe and sound, though Motion is lost, if trembling or pain follow, it is accounted a good sign. If the Eye on the paralytick side be not lessened, if the Patient keep his Strength without

Head-ach or *Vertigo*; if also (as said before) there be a Fever, it is hope. But the Case is bad, if the paralytick part feels cold to touch, because it shows that few Spirits are carried by the Nerves, and therefore we judge, the Nerves are strangely obstructed. It is so, if the Excrements and Urine come out involuntarily. *Hippocrates* L. 2. c. 1. gives this Case a black Chance. If any one be ill in the spinal Marrow, and if after a Fall, or any other accident, a man be deaf, and when he is called, if he feel not, and if he neither goes to stool nor makes water, unless forced; but when the disease is inveterate, if the Excrements cease to come away, without the Will, then he dies within a short time. In Old Men a Palsy is more dangerous, because the Nerves of the Parts are hard, and the Fibres are not pliable; wherefore Obstructions bred in them are more difficult to be removed.

If a Man's mind be preternaturally stupid, it is bad; but it is otherwise if a critical *Diarrhœa* supervene. A Palsy ends in Death when a Plethora and Consumption, and profuse Sweat follow it. Convulsions follow a Palsy, and it is a scorbutick Palsy, because there is a saline or acid Acrimony which corrodes and vellicates the Nerves, which is so bad, because there is a Continuation of Diseases.

There are many Diseases in which a Palsy comes, namely Epilepsy, Apoplexy (the matter being discharged into a morbid part) Colick, Tertian Ague, Scurvy. *Brassavolus* mentions a Palsy followed by bleeding from the Nose, the Animal Spirits being exhausted. If a Palsy follow upon an Apoplexy, it is dangerous.

use it is apt to turn again to an
apoplexy.

§. 13. Dietetic Cure.

Hitherto we have been viewing
one Hemisphere of this Dis-
ease, now we will take a view of
the other, that is, the Cure, where
Nature first presents it self, which
is in those six nonnatural
Qualities, which are well known to
have Dominion over our Bodies. Among
these Air takes the first place,
according to Hippocrates f. 3. aphor.
Alterations of the Seasons especially
of Diseases, and in the Seasons
alterations of Heat and Cold are
the Cause. Therefore a hot, dry and
thick Air is to be chosen, which
may be procured by a good Fire,
at the time of the year require it,
and aromatic Fumes. On the
contrary, a rainy, moist, cloudy,
and especially a cold Air must be avoided.
For Helmont l. 1. §. 61.
Upon good ground call the
Quality of the ambient Air Narcotic.
It is universally held, That
these things are Enemies to the
Nerves. I can say little here,
of the influence of the Stars,
I am uncertain, whether
a Sanguine Man be not in an Error,
who attributes a peculiar vir-
tue to the influence of the Stars.
By Practice I have observed
that Palsies and Apoplexies come
on in the Full Moon. Here I
produce Cartes his Reason,
of the Sea's Ebbing and Flowing;
and of the Increase and Decrease
of the Moon, since the same
alteration may happen in the Mi-
nute, as it does in the Macro-
cosm. But since uncertain Con-
jecture dares not pick out particu-
lars, nor prove universals, we sus-

pend our Judgment, till we can en-
quire and prove by experience,
what we ought to think of the in-
fluence of the Stars.

The *Meat* must be heating and
drying, therefore let the Patient eat
Flesh roasted, & other Meats of good
Juice, season'd with aromatic Herbs,
Rosemary, mother of Thyme, Sage,
Majoran, &c. Nor must a man eat
excessively or disorderly. On the
contrary, he must avoid all meats of
a bad juice, as Salt, smock-dried, and
sowre Meats, milk Meats, and the like,
which were endless to mention.

The *Drink* must be little, let the
Patient drink Sage or Rosemary
Wine, or Mede, or Water where-
in Sage has been boyled. Beer aro-
matized, and well fermented and
clear, may be allowed; and also
drinking of *Tea*. All seculent, gene-
rous Wines must be utterly avoided,
as Hungarian, strong French, Italian
and Spanish Wines, because they
have a subtil tartar in them, that
is sharp and hurtful to the Nerves,
as Paracelsus tract. 2. de contract. c. 5.
testifies. And the trembling joynts
of Bacchus's Heroes, and such as
offer sacrifice to him whole nights,
confirm the same, who thereby do
not only disturb Chylification, but
stupifie the animal Spirits, and
so turn Executioners to themselves.
But drinking of Brandy or *Aqua
vita* (rather *mortis*) must above all
be forborn, because these, as all nar-
cotic and soporiferous things, mor-
tifie and banish the animal Spirits.

Let him *Exercise* the paralytic
Part moderately, but forbear all
violent motion; for such wearies the
Limbs and wasts the Spirits. And
too much *Rest* also renders the Bo-
dy flaccid, by filling the Head with
serous matter: for Waters, except
they move, must needs corrupt and

Putrefy ; and just so the Blood and Serum grow ropy , and thereby become fit to cause Obstructions.

Sleep must be moderate, day sleep and long sleep are naught. And they take no good course with themselves, who are too much delighted with *Morpheus* his pleasing Phantasms : for so, upon the approach of an Enemy from abroad the Brain may be drowned, which inundation threatens an unhappy Issue, either in a palsy, or in an Apoplexy. Too much Watching also is naught. For it exhausts the animal Spirits, and weakens the Brain, and whole nervous kind.

As to the *Excreta* and *Retenta*, Stool and Urine ought to pass according to Nature, every day, if possible. Other usual Evacuations, such as the *Menses* , Hemorrhoids, Sweat, &c. should be made in due time, or procured.

As to the *Passions* of the Mind, the Patient should study to be cheerful, whereby brisk, subtil, saline, volatil and oily Particles are bred in his Blood, of which afterwards animal Spirits are made, which are the most subtil Part, yea, the flower of the Blood. Far off therefore be his Enemies, Grief, Sadness, Care ; for such as emaciate themselves with the Passions of the Mind, put a Sword to their own Throats. I have known several, who through Grief and Care have fallen into a Palsy. Anger must be wholly avoided : for the trembling of the Joynts and Tongue testify, what an Enemy it is to the Nerves. Fright also and sudden Fear should be avoided in this Disease : though there be a rare Instance in *Valeriana* , how violent Commotions of the Mind have done good in this Case ; for Fear fixes the Spirits,

§. 14. Pharmaceutic

NOW that we are come to the Pharmaceutic Cure, we know that the Old Galenists commend Preparers in a Palsy, as *Hydromel*, *Oxymel*, decoction of *Florentine Iris Root*, *Flower of Sage*, *French Lavender*, *Cinnamon*, *Mel rosarum*, *Sage Water* of Sage, *Betony*, &c. They extol the drinking a Decoction of Sage and aromatick Herbs for four or five days. After these things they prescribe various Evacuators, *pilula cochiae*, *de agarico*, *serena*, *stichina*, &c. *hiera dia colica*, *dia catholicum*. But in this they use Pills more than Eleos, because they think, Pills do matter better from remote Parts.

They hold that a Vomitive given once a week, of some of the known Vomits. If a Palsy come from abundance of Blood, (which it seldom does) and the Patient be plethorick, they allow and encourage bleeding on the sound side. And if the Patient has used these three or four times, then they take themselves to Revellations, among which Clysters made of Sage, Chamomil, Majoran, Marsh-mallow, Rue, adding a little *picra*, *Sal gemma*, and some Oyls, are good. Here also the Torments present themselves, as Vomiting, Pellitory of Spain, Gargarisms, Cuppings, Nasalizing Powders, Frictions with a coarse hot Cloth, and the applying of Blisters to the Neck. When these things are done, they use Corroboraters, which strengthen the Brain and Nerves, and so amend all manner of

ure, such as Treacle, Mithridate, Ambra, Diamoschu dulce, Preferred Ginger, Conserve of Sage, Bery, Rosemary Flowers, Galan-
 &c. a Decoction of the Woods
 acorus Root, Ginger, French
 vander, Ground-Pine, &c. They
 ment the paralytic Part with a
 decoction of Aromatics. They
 ke a Bath for the part affected of
 Decoction of a Fox. They first
 ynt the part with Oyl of a Fox,
 then wrap it in his Skin. They
 ke Baths their Refuge, as well
 phureous as nitrous, either Na-
 tural or Artificial. They put the Pa-
 nt in a sweating-Tub twice a day,
 they apply heated Stones be-
 nked with hot Wine; and when
 y come out they are put to bed,
 take a Drachm of Venice Trea-
 cle, and they order the Nerves to
 anoynted with some proper aro-
 matic Oyl. Among things that
 ngthen the extreme Parts, they
 ol Unguentum Agrippæ, de Ca-
 ro, Nardo, ex Pipere, Oyl of Cha-
 mil, Worms, Rue, Philosopho-
 , Bays, Turpentine, Costinum,
 phur, &c. But I will not write
 ds after Homer.

§. 15.

He Paracelsists use the same
 Cure both in an Apoplexy and
 Palsy, whose Master lays down a
 fold Cure, depending on a two-
 Cause, to wit, a *Resolutum sic-*
 , and a *Resolutum coagulatum*.
 the first Gutta he endeavors to cure
 in this following.
 of Extract of Spike, Laven-
 der, Cheiri Flowers; each three
 Ounces, Axungia de Mumia,
 an's Marrow each one Ounce
 and an half. Mix them.
 but he cures a Gutta from a
 solutum coagulatum in this manner.

Take of Extract of Pepper, Carda-
 mom, Castor, Anacardium, Oyl of
 Bays, Dill each one Ounce and
 an half, Nutmeg half an Ounce.
 Mix them.

Lib. 7. de gradib. c. 2. He says,
 Lavender is a great Medicine in this
 Disease, and also Baum, sometimes
 Betony, Castor, Pepper, fat Oyl
 of Sulphur; yet he adds, that all
 things are not good for all People.
 In lib. 5. de venisect. he condemns
 bleeding in the Toes, but he is for
 opening a Vein before the Fit comes,
 where he shews the manner and
 time of doing it. In the Palsy he
 says, comfortable and strengthening
 things must be given by themselves,
 such as Aqua vitæ, Essence of La-
 vander, Aurum Potabile, Liquor of
 Pearl, &c. He has this process.

Take of pure Sol purged by Anti-
 mony two Drachms, Water of
 Sal gemm fix Ounces, reduce
 them into one with a Separation
 of the Spirit of Wine; then take
 of Saffron two Drachms, Alcohol
 corrected fix Drachms: the Dose
 from three Grains to four or
 fix. Or,

Take of Sol prepared one Scruple,
 Lavender Water corrected with
 Alcohol of Wine and Spike each
 one Ounce: the Dose one Scruple.

He highly commends arcanum
 Sulphuris in Palsies and witherings
 of the Limbs tr. 2. de memb. contract.
 The Description of it follows.

Take of Flowers of Sulphur half a
 pound, white Antimony two
 Ounces, Juice of Gold one Ounce,
 Aqua Vitæ circulated ten Ounces.
 Digest them a Month. The
 Dose is half a Drachm.

He also commends Pearl, Balsam of Antimony, *arcanum quintessentia*, Oyl of Vitriol, &c. For to purge, he mixes powder of Man's Bones with purgatives. After Internals he also delivers several Externals, he makes Fomentations with Locusts of the firr Tree and tops of Juniper. He orders the Part to be anoynted with Fox Oyl and *Galbanetum Paracelsi*. He commends natural, strengthening and hot Baths. If you would have more, consult him.

§. 16.

FOR now we will go to the *Helmontians*, who highly value volatill Salts, especially such as are made of cephalic Aromatics: and they highly extol Vomits in this Disease, such as emetick Tartar, white Vitriol, *asarum Root*, &c. and other Experiments, which the first Author of this Sect, that accurate Observer of distillations, knew, which we must conceal, because they still lie buried in Obscurity.

§. 17.

WHEN the Palsy comes from an external Accident, to wit, a blow, falling from on high, a wound, excess of cold, or the like, because in these Cases there is an Efflux of Blood, and Humors, he advises bleeding, and to keep the Belly always open with a Clyster, then to put the Patient to bed and give him a gentle Sweat, that the serous superfluities may gradually exhale, and the animal Spirits being gently agitated may do as they were used; for which end he commends *Pulvis ad casum*, described in the *Augustan Dispensatory*, and the Traumatick Decoction with root of Madder or butter-Bur, or flow-

ers of *St. John's Wort*. If be a Tumor, Contusion or he applies divers Balsams, Liniments, Fomentations or Cataplasms to the part affected; and if the Limb be dislocated, it must presently be reduced: If no swelling appears, he commends *emplastrum de minio*, &c. Sometimes he will have the paralytic Limb into horse Dung or hot Ground held there a good while. In the Paral, he is not for bleeding. In this Disease, because the animals are both bred of the Flower of Blood, and become elastic by reason of the motive Fibres, by reason of the copula of the Blood; therefore if the Blood be diminished, the Limb will fail, and the Limbs of the Patient will flag.

He commends Evacuation by the Equinoctials, and especially a Vomit of *tartarum emeticum* three or four Grains, *Sassafras*, Antimony, &c. Among Purges he chuses Refin of *Jalap*, *de succino* or *aloe phangina*; and prescribes the giving of cephalic Medicines after them, and between such as Elecuaries, Powders, and volatill Salts, Tinctures, and Lixirs, with distilled Waters. For the ordinary Drink he commends Beer medicated with Sage, French Lavender, *Sassafras*, *Winter Bark*, the whole year Issues may be made in the Arm or other Parts, especially in fat and cachectic Persons. In the cold or hot Palsy, he advises forbearance of Medicines, especially hot and endued with acrimony; and in this Case he commends mixtures of gentle things. In the paralytic Palsy, juices and decoctions of antiscorbutic Herbs, mixed with Cephalics, do the

§. 20.

Our own Method is this. First we purge the coagulated Serum. If an Acid abound, we give Antacids. But always in Purging we must consider the Patient's strength. And in this case gentle Purgers are best. Aloe-ticks are good. And divers Infusions and medicated Wines. But Preparers must be given first; made of Incisers and Absorbents. Vomits are proper, especially *tartarum emeticum* made after *Ludovicus* his way; from one Grain to five. Diaphoreticks also are good. Where an Acid offends, volatile Alkali's are proper; and volatile urinous Salts, and solid fixt ones do good, as they ferment the Blood, and rarefy the Animal Spirits, and they being rarefied free themselves of the narcotick Recrements, and expel them out of the Body.

We are furnished with Matter for them out of the three-fold Kingdom, as *Sal cornu Cervi succinat. volat.* and (not to seek abroad what we have at home) Salt and Spirit of Soot: If you had rather have that which is dearer, you may make use of Essence of Castor, Spirit of *Sal Armoriac. Liquor C. C. succinat.* and other volatile things.

§. 18.

commends topical Remedies, ally about the Part affected. divides to put the paralyrick into the Belly or Breast of a new killed, or in a Bath, for a while. Diaphoreticks are in some Constitutions, but not in others. He says, like- That Salivation has cured se-

Plinius in a piritous Palsy, 1. Purges. 2. He gives Errhines, Turatories and Apophlegmatics. His Purges are Phlegmagogues, specially *Mercurius dulcis*. For observes, That Mercurials are to purge Phlegm, and Antis for Cholera. Issues, Setons the Neck, and Cuppings are and bleeding, if there be a dry or shortness of Breath. Issues are good to correct the pores. And outward application very proper. If it proceeds from a *narcosis*, sharp things mixed with a fixitious volatile Salt, cure it.

§. 19.

He *Cartesians* first give a gentle Purge. Then they correct the viscid Blood, they open Pores of the Brain and the by Sudorifics, and they tartar, to extract the virtues the Simples the better. And of all they give strengthening astringent things.

We also reckon oily Volatils to be of singular use in this Case, by which we have recover'd many; amongst which *Scheffer's Balsamus nervinus* far excels all the rest; which is usually prepar'd of Salt of Harts-horn, volatil Oyl of Mace, and Spirit of Wine; Preparations of Vipers are likewise very good; with the volatil Salt of which the Excellent *Wedelius* cur'd the Prince of *Nassaw*, who was sick of this Disease. Sometimes precipitating, fix'd or dulcifying and Absorbent *Alkali's* do the work; especially when mixt with other Specifics, *Wedelius's* Absorbent, describ'd in his *Opiologia*, is very efficacious; to which, if there be occasion, may be added *pulvis lumbricorum*, *terra succin. prepar.* or their volatil Salts.

Take *Bezoard. Mart.* twelve Grains, *Pulvis absorbens Wedel.* one Scruple, *Marchion.* half a Drachm. Mix them, and divide it into three equal Parts for three Doses. Or,

Take Water of *Carduus Benedictus*, Germander of each one Ounce, *Spir. C. C. succinat.* twelve Grains, *Essent. Antimon. tartarizat.* fifteen Grains, Syrup of *Scordium* as much as will serve to sweeten it. Mix it for a Draught, and let the sick Person dispose his Body to sweat.

Besides all Preparations of Vipers, are very sovereign in this Distemper both taken internally, and applied outwardly. Ex. gr.

Take *Off. microscop.* *Drachms*, of the back of Vipers one Drachm, *Cratimon.* four Scruples. Mix and make a Powder, or give a Scruple at a time.

Take *Tinct. Bezoart. Essent. compos.* of each a Drachm, *nistr. Cephal.* a Scruple. Mix them. Of which let the Patient take every Morning for three days in what quantity he pleases.

But volatil Salts are the best in this Case, as also in all other Distempers commonly so called, because they compose the Spirits, and by their Volatility which are Volatil, pierce themselves into the Nerves, and run quite through them; that means give a free Passage of Vigor to the Animal Spirit, creating them as one fire doth ether. For the sake of Brevity we will add a Receipt or two.

Take *Pulv. Cephal. D. Antimon.* a Drachm, *Mazist. Cran.* Castor of each ten Grains. Mix them for two Doses.

Take Water of Lily of the Valley half an Ounce, Volatil Salt of *Armoniac.* two Drachms. Mix them. Or,

Take *Elixir. Cephal. Tartarizat.* Drachms, Spirit of Salt of *Armoniac.* half a Drachm, Oyl of *Jorani* five Grains. Mix them.

Take *Spir. Secundinar. Lij. succinatus* of each one Drachm, Essence of Castor half a Drachm.

of the Woods one Drachm. Mix them. The Dose is twenty Drops.

In a scorbutic Palsy, and that which comes from the Colick, let such Remedies be apply'd as serve to vigorate and strengthen the Brain and Nerves, mixt with strong Antiscorbutics; which cannot be better done than by putting absorbent and precipitating Medicines to antiscorbutic Remedies, which being thus mixt, are of wonderful use. *Ex. gr.*

Take Spirit of Scurvy Grass, Brooklime, *Elix. Propr.* prepared with the Spirit of Scurvy Grass, Spirit of *Lumbricor. terr.* of each a Drachm. Mix them. Spirit of Tartar dulcifi'd, Tincture of *Mars*, Vitriol of *Mars*, *Pulvis D. Michaëlis*, are very good; and Diuretics are also very proper to remove the tartarous Recrements, as the sowre and sculent *Saum*, or the impure and wild Salts. *Ex. gr.*

Take of the Salt of Germander, Ground-pine, *Scordium* of each a Scruple, Tartar vitriolated half a Drachm, *Lap. Cancror.* two Scruples, Oil of Cloves one Grain. Mix them, and make a Powder to be divided into eight parts for so many times taking.

But in this Case sulphurous Baths are proper; for *Citellus* says, He has known divers thrown into a Palsy out of a Colick, which was formerly Epidemical amongst them, and perfectly cured in a short time by these Baths. The most famous *Dr. Charleton* in his Treatise of the

Scurvy, (reports) the same of the Bath in *Somersetshire*.

If the Palsy come by taking Narcotics immoderately, as we have sometimes observed, then the Physician must ply the Patient with Medicaments that abound with a volatile lixivious Salt and other saline Volatils, as the Essence of Castor, &c.

Besides these Pharmaceutics, we advise Chirurgic Operations, but bleeding is not to be advised in this Case; for seeing we find all the Parts feeble in Paralytics, what else can be the effects of bleeding, but to pour forth the precious Balsam of Life already brought so low, which done, the Soul departs? Yet we do not intend to reject Phlebotomy; for in a particular Palsy that comes by a Fall, or Stroke, or from the Blood, &c. we allow it. And also if the Haemorrhoids or other customary Evacuations have been stopt for some time, we then approve it, as also if it happen in the beginning of a resolving Apoplexy that turns into a palsy. So likewise we forbid Cupping with Scarification, which do only torture the Patient, and attract foggy Mists and wild Particles that obstruct the Passages.

Now, that the Spirit and Heat with the Blood may be deriv'd to the Parts, and that a lively Tone may be brought to the loosened Part, we advise rubbing, especially when the Sense once fails; nor do we think that stinging with fresh Nettles is to be neglected; which is to be us'd once or twice a day, till the Part grow red.

We like Serons and Cauteries very well, as *Sylvius* also does, for they evacuate the serous Matter. If the Distemper come from Com-

pression, a Wound, Contorsion or Fracture, those parts must be put in their proper places with all speed imaginable.

Amongst outward Topics we commend above all other, the wonderful artificial Balsam laid to the Nape of the Neck: But to the back Bone these that follow.

Take *Unguentum Martiatum*, *Nervinum* of each half an Ounce, Oil of Bricks, of Amber of each half a Drachm, *Ol. Petrol.* one Drachm. Mix them. Or,

Take *Unguentum Nervinum* one Ounce, *Ol. Anthos*, Amber of each one Scruple, boiled Rue three Drachms, Spike, Sage, Juniper of each half a Drachm, *Balsam. de Peru. nigr.* one Drachm. Mix them. Or,

Take of *Unguentum Nervin.* two Ounces, Oil of Earth-Worms one Ounce. Mix them.

Oil of *Cantharides* mixt with other aromatic Oils, and the outward Parts anointed therewith, is an excellent Remedy.

Let the Belly of a Stork or Cock be fill'd with appropriate Medicines, then let it be roasted. The Fat that drops from it, is very good in paralytical Distempers.

Spirit of Earth-Worms, Ants and Wood-Lice, &c. will not prove ineffectual. But let this be caution'd in the mean time, that Oils fry'd by themselves or Fats be not too frequently used; for by their Viscidity they stop up the Pores, so that they must be diluted with hotter things, as Tinctures, Spirits of Wine, and other spiritous things; as *Heffer* observes with us.

We approve of *Fomentations*, Washings, Perfumes of Herbs and Aromatics, which be infus'd in the Spirit of Wine, and afterwards distilled; for spiritous things penetrate, and irradiate and strengthen the Nerves. For this end we commend the following antiparalytic Essences found by us to be very good for Members.

Take of the volatil Salt of Horn one Ounce, dissolve in an aromatic Liquor, and let the two precious Refinements the Sea throws forth be four Ounces, of the sweet smelling Mummy two Ounces. Mix them, and let it be a Treasure against the Palsy.

Take of the Spirit of Lily of the Valley, *Aqua Apoplectica* of each one Ounce, *Ess. of Castor* a Drachm. Mix them, and with this let the Back be anointed from the Neck to the Hip-Bone.

Sternutatories, Perfumes, both Natural and Artificial, have their share here; where sulphurous and minorous things are much beneficial. The frequent Use of warm Baths, wherein are put Pine, and Ants, with nervine aromatic Herbs, and likewise Minerals, are very Excellent in this Case; for they strengthen loose Parts, restore the Tissues, digest and dissipate the Humours got into the parts, and their Rites may the more freely discharge their Offices.

And this was the Method of the famous *Borrichus* an Italian Physician, who put several Animals;

gs, Ants, Swallows, &c. in a
 ale together, and so made a Bath
 'em. Whom a great and most
 ous Chirurgeon did succesfully
 trate; who made Unguents and
 Oyls of the same Creatures,
 y proper for this and such like
 eases.

To conclude, by that Excellent
 ention of Transfusion we have
 erimes cured the Palsy. We

have likewise many times, with
 good Success order'd the paralytic
 Parts to be put upon hot Things
 made of Barley, and the Entrails
 of several Animals. Nor must the
 Physician give out, for tho by these
 means the Patient be not presently
 cur'd: yet he must not despair;
 for it is a Chronical Distemper, and
 so he must often revolve in his Mind
 what *Hippocrat.* says, §. 2. *Aph.* 52.

CHAP.

C H A P. XII.

Of a Convulsion.§. I. *Etymology.*

A *Convulsion* is deriv'd from *Convello*, to pull together; and *Spasmus*, from *σπᾶω*, to contract; because that in this Disease one may observe both the beginning and end of the Muscles to be pull'd and contracted together into one. It is also abusively call'd a *Cramp*. A *Spasmus* or *Spasm* differs from a *Convulsion*, in that the *Spasmus* is always dolorick, but a *Convulsion* is not so.

Definition.

IT is usually defin'd, *An involuntary, constant and painful Contraction of the Muscles, proceeding from a more inward irritation of the nervous Parts, or a too strong Inflation of the Animal Spirits.* I said *Involuntary*; because this Disease forcibly moves the Nerves, or their Fibres and Muscles without the consent of the Will, and so there is an involuntary Motion in a Part, which before had a voluntary one; and it is painful, because it seizes those parts which have the most exquisite Sensation.

Difference.

AS to its several Species, there are Degrees; sometimes the whole Body is taken with a *Convulsion*, as in a *Tetanus*; sometimes the whole Body is upwards stretched out; in which the Beginning of the Nerves is to be hurt. In an *Empyrius* or an *Opisthoronus* all the parts of the Body are bended; in the former, backwards; in the latter, forwards. Sometimes all the parts of the Body, except the Head, are drawn together; sometimes the Head only is drawn backward towards the Back. But it most frequently happens that some one particular part is contracted, as the Eye, the Jaw, the Tongue, the Throat, the Swallow, the Tongue, the Forehead, the Neck, the Arm, Toe, &c. There is also a gentler sort of *Spasmus*, which often in a very short time goes off of it self, sometimes cured merely by rubbing, which *Spasmus* does seldom continue more than an hour, and this is it which we perceive in our Legs, Arms, Fingers and Toes. Some

and Arms, so closely contracted
it, and sometimes their Hands,
at all the strength of the
standers is scarce enough to
bring them to their right posture a-
gain, before the Fit be over. O-
thers have their Mouths spasmodi-
cally contracted, which they call
ismus cynicus and this is when
the broad Muscle of the Mouth be-
comes contracted only in one part,
takes the Figure of a grinning
face: but if both parts be contract-
ed, it looks like one laughing, and
is call'd *Risus Sardonicus*. If, be-
sides this, the Muscles of the Tem-
ple and Jaw-bones be irritated
and contracted, together with a
pricking of the Teeth, it is call'd
Trismus. Sometimes the Mandibles
become so clos'd, that they can never
open'd.

§. 2. Part affected.

Authors differ greatly about the
Subject of the Convulsion.

Ancients thought the Brain to
be primarily affected, but the great-
est part conclude the Muscles, some
the Nerves, and some the Animal
Spirits, as being the Instrument of
Motion.

Some few, who follow *Willis*, say,
that the Tendons; many, the *Cas-
siofibrosa*, because fibrous and mem-
branous. *Sylvius* and others the *Cer-
ebrum* and *Cerebellum*, together with
the beginning of the Roots of the
Spinalis Medulla. Thus others. Our
Opinion now follows: Laying it
down first as a certain Truth, That
it is the same Subject of vo-
luntary or natural, and involunta-
ry or preternatural Motion, and
according to the Opinion and
Consent of Anatomists, the
Muscles full of nervous Fibres, are

reckon'd the Instrument of vo-
luntary Motion. We do conclude
that those Muscles are also the Or-
gan and adequate Subject of that
involuntary spasmodic Motion,
which *Helmont* also proves, saying,
that the Muscles have two Motions,
one in which they observe the Will:
and the other when they are car-
ried on by their own Motion, with-
out the Will. And this last is also
twofold; the first, when contract-
ed by one continu'd Violence, as
in the Cramp. We observ'd like-
wise in the foregoing Discourse,
that a Convulsion is immediately
caus'd by an Irritation; for we fre-
quently see that the muscular Flesh
one while seems to be cut, at other
times prick'd, without any Convul-
sion, and on the contrary, that
Convulsions frequently come from
the pricking of the Nerves and
Wounds in the nervous Parts, as
may be seen by the bite of Serpents,
Vipers and other poisonous Crea-
tures. So that we have reason to
conclude that the Nerves and their
Fibres are the Subject of a spasmo-
dic Contraction.

For seeing the Nerves have the
quickest Sense, they first feel the
Irritation before the other parts,
and at the same time put the Ani-
mal Spirits they contain, into a
violent Motion, by which means
there must needs be a deprav'd
Motion and Sense. We take the
Nerves here inclusively, with their
fibrous, tendinous, membranous Pro-
ductions, and full of Animal Spi-
rits; all which, after there is an Ir-
ritation, are by a continued Mo-
tion spasmodically contracted, and
so draw together the whole Mus-
cle, which is the proper Instru-
ment of Motion; and if it be
contrary to its Inclination, con-
tracted

tracted towards its Original it is properly said to be hurt ; as in the Spasm of the Eye, which is call'd *Strabismus* ; the Muscles that move it are drawn together. In a *Spasmus Cynicus* the muscles of half the Face only are contracted ; but if of both parts, it makes one look as if he were laughing, and is call'd *Risus Sardonius*. If the Lips are distorted, the *Musculus Latissimus* is affected, from which proceed the muscles of the Lips ; and the same may be said of the other parts of the Body. But we may with a pleasant Satisfaction observe this preternatural Motion, if we take notice how the Muscles of Cattle just kill'd, and yet reeking hot, do tremble throughout the Body (like the Hearts of Serpents, Fishes, Eels, &c. when they are pull'd out.) For we see that they are mov'd variously up and down, tho' without Blood, by the Spirits yet remaining, which the Excellent *Estmallerius* confirms in his Elegant Disputation, call'd, the *Small Beginnings of Great Diseases*, §. 15. There may be a Convulsion in every part, where there are Fibres ; and all Pains may be derived from hence.

§. 3. Signs.

WE now pass to the *Signs*, by which we guess at this Disease. In every Distention of the Nerves there is commonly a great Pain, which does strangely decay the Strength, especially if it continue long ; besides, the part affected does so strongly incline to its Original, through the mediation of the Nerves, Muscles and Animal Spirits, and all this without the content of the Will ; that it is hardly reduc'd to its former Po-

sture, and whilst all the parts subject to the Head, are convulsed happens, beside this Attraction, the Body either cannot be mov'd at all, or else that it is either drawn forwards, that the Chest is joyn'd to the Breast, or so drawn backwards that the Head is visibly drawn down upon the Shoulder-blades. Sometimes the Head is violently shaken to and fro, the Face growing very red, and in great pain. Sometimes the Eyes are distorted, shed Tears, and the Patient can scarce open his Mouth. The Back, Cheek-bones, Ham-bones, Legs are stiff, and cannot be flex'd. So that when the Disease is near the Patient is so sadly tortured, that the Extremity of the pain makes he leaps out of Bed, cries out like a mad man, behaves furiously, and does, the Spasms, living after this manner out of the Sphere. In the end he dies, what he drinks through his Strills, and fancies several *Idea's*.

§. 4. Cause.

THE Ancients declar'd the immediate Cause of this Disease to be either a Repletion or Emptiness, contrary to the Opinion, who look'd upon it as old Women's Stories. In Repletion they deriv'd either from Blood, whence they say a Convulsion comes even in a healthy Body, in case of too much Exercise, excessive Eating and Drinking, or else from the picrocras, which, like the Blood, makes the substance of the Nerves and Muscles, provided the Muscles are dilated, according to Profundity, Latitude, and

le, and after they are contract-
ed, for then they think a Convul-
sion or Spasim arises.

But they deduce the immediate
Causes from several Things : either
from an Aposthume, or the stop-
ping of some natural Evacuation,
sometimes also from gross Va-
riety, when the *Spasmus* comes on
sudden, and goes off gently.
As far for Repletion, now for
Evacuation.

That the Empriness or Driness
of the Nerve is often a Cause, they
endeavour to prove by these Rea-
sons : Because a *Spasmus* is a longer
Time in contracting, and too much
or, immoderate Watchings, a
fever, Care, immoderate
Fasting, Vomiting, Purgings, Loss
of too much Blood, immoderate
Exercising of Women, Inflammation, Vo-
miting by Hellebore or other poy-
sonous Things, Torture, a Hectic
Fever, Cauteries, or Vescatories
directly apply'd to some ner-
vous Part, a great Heat in the ner-
vous Parts, or other such like
Causes have preceded. For from
these remote or procatartic Cau-
ses they say it happens that the
Nerves, and sometimes the Nerves
themselves, are dry'd up to that de-
gree that their proper radical Moi-
sture being spent, they are parch'd
like Leather before the Fire, and
crack'd together.

§. 5.

Acacellius refers a *Spasmus*
which he calls *Contractura* to
its Rise, to an Epilepsy, he
thinks its principal Cause to be the
Use of Mercury, impregnated
with an acerous Salt, making five
according to the diversity of
Causes. 1. He says it comes

from some Hurt, Wound, Blow,
Bruise, Fall, Nerves shrunk, a Wound
not well cured. 2. From the Stone
and Gravel in the Reins, and Blad-
der. 3. From the Colick, the
sharpness of the yellow and black
Choler putting the Members into a
Convulsion. 4. From Anger. 5.
From Wine. In another place he
proves this Distemper comes from
a kind of Microcosmical Mercury,
by those who meddle much with
it. In another he holds that it
proceeds from Wind or a *Flatus*,
as also from too much Eating and
Drinking.

§. 6.

Helmont calling this Distemper
a smaller Epilepsy, thinks e-
very Convulsion to come from the
vital *Blas* of the Muscles, stirr'd up
by the innate *Archæus*, which is
occasion'd by some malignant thing,
running into the *Archæus* of the
Muscles, and there privately de-
signing against Life; and in *cap. 11.*
de Lithiasi n. 131, 132. he says
there are several sorts of *Spasms*;
as in an *Asthma* he thinks the Mem-
brane that incompasses the Lungs
to be affected; in a Pleurisy, the
Pleura; in the Palpitation and
Anxiety of the Heart, the *Media-*
stinum or *Diaphragma*; in Vomiting,
Hiccoughing, *Cardialgia*, or Heart-
burn, the Stomach; in the Drop-
sy, &c. the *Abdomen*, in inter-
mitting Gripes or Colicks, the
Intestines; and also that in a
Gonorrhæa, the *vasa parastata* are
contracted by the sharpness of the
Seed, and that thereby a *Spasmus*
is caus'd. He believes all the con-
tractions of these Parts to be pain-
ful, because they affect the *Archæ-*
us and Spirit, with their Sharpness,
Crab-

Crabbedness, or degrees of Heat and Cold; for he will have the greatest Heat to proceed from Fire; the next from *Alkali's*, or Corrosives, Sowre, Crabbed, Pontick; and also from salt, sharp, bitter Things and Poysons.

§. 7.

Willis, that English *Galen*, supposes certain heterogeneous and very explosive Particles, to encrease with the Animal Spirits that are in this or that Region of the Body; and shews that the violent and frequent Explosions, caus'd through the mischievous Combination and restless Collision of this Matter and the Spirits, do bring spasmodic Fits. For as often as the nitrosulphureous Particles encrease with the spirituous saline Particles of the Animal Spirits, so often are impetuous Explosions caus'd; which spasmodic Explosions, according to our Author, are not only rais'd in the Muscles; but also in the Membranes, Stomach, Intestines, Mesentery, and other parts void of Blood. The Cramp or *Tetanus* commonly comes, when the Animal Spirits violently jump from one or both Tendons into the *Venter* of the Muscle, from whence not returning as usually, but staying too long between the Flesh, swell it up mightily and contract it; and then if other Spirits neither yield to these Muscles, nor are contracted with them, the stiff part is stretched with intolerable Pain. The Cause of this is said to be, an heterogeneous Matter, which passing into the Muscles through the nervous *Ductus's*, with their juice, and cohering with the Spirits, makes them elastic and stiff, so

that they cannot be kept the tedious Fibres, but have more room to play in, and there their Tension abate.

§. 8.

FRANCISCUS de le *Ca*sius imputes the Cause sometimes to an Acrimony, and sometimes to an Acidity in the Blood, and so argues that one is milder, especially black, as the other is sharpest and most acid. He saith, either while putresc'd Phlegm is the Cause in this, either the acrimonious Salt lies, is the Cause of the Disease; for through the Acrimony and Acridity of these the membranous parts of the *Cerebellum*, the *spinalis Medulla*, Nerves, and indeed of every part, are so vellicated, and so irritated, that a violent, copious Motion of the Animal Spirits is sent upon the Fibres of the Muscles upon it; which is what we call *Spasmus*.

§. 9.

THE *Cartesians* do but agree in the Cause of the Disease (they agree in the Temper, with the *Ancients* happens but seldom) for they derive the Cause from the Emptiness of the Nerves, and prove it by the same Arguments that the *Ancients* do: That the strings in an Instrument contracted by too great heat, even so are the Nerves convuls'd and drawn closer together, and they will have the same Cause come by a clammy, cold *Flatus*, that swells and distends the parts; and they prove it

ft other Arguments ; because
y be remov'd by moderate
and only by rubbing the

§. 10.

7^E, leaving others to their
Opinions, may be allow-
to give our own ; which is,
Convulsion, both General and
ular, comes immediately from
ry and disorder of the Ani-
spirits, which is yet somewhat
an in an Epilepsy. Now all
comes principally from the
s, for 'tis they that are the
sters of local Motion in the
omy of the Body, by the
of the moving Fibres ; so
often as any part is affected
pain, through the inordinate
violent Vibration of the sensi-
fibres, the Spirits are forc'd
at part, by which is caus'd a
nd little less than spasmodic
on of them : for so long as
spirits have their elastic Mo-
so long will remain in Vigor
one of the moving Fibres, and
thence an Aptitude as well of
ly receiving a sensible Im-
an of outward Objects, as a
ual endeavor to move. So
the local Motion of the con-
g parts will continue together
a quick distribution of the
contain'd, and, according as
ocation may be, with an in-
te Commotion, and, some-
Exclusion of those Parts.
e motive force of those Spi-
ing stopt, and their darting
e in a manner hindred,
one of the Fibres will cease
proportionably, the easie re-
on of Sensibles will abate, and
motive Endeavor will decay ;

as the famous *Ettmullerus* ingeniouſ-
ly argues. And so a *Spasmus* pro-
ceeds from the Pipes of the Mus-
cles being obstructed, which makes
the Humors to stick there ; and
the Spirits being hinder'd from en-
tering in, rush into those Fibres a-
bout the Obstruction, and by that
Irruption, irregularly twitch the
Nerves ; and this Reason they
give, why the Spirits in great quan-
tity run into the Muscles, through
the open Pores of the Nerves, and
distend them so much. The first
and principal Cause of a Spasm very
often lies in the Member it self, and
not in the Brain. Let us now a while
consider the Mediate Causes. The
Enemy coming arm'd with so ma-
ny several Weapons, some sharp and
some blunt, attacks all the nervous
Fibres, being the Outworks in which
the Animal Spirits reside, which
Spirits running out impetuously, an
Irritation of those nervous parts
is caus'd ; by which more inward
and constant Irritation, the nervous
Fibres are twitched and contract-
ed ; the Muscles are shorten'd and
swell, together with a Pain and
Hardness caus'd only by this vio-
lent Influx of the Animal Spirits.
For it is the shrinking up of the
nervous Fibres, moved with pain,
and not Fumes and Vapors that cause
convulsive Motions. Now those
things that twitch the nervous Parts,
and cause Crispations, are all sharp,
bilious, sometimes acid, pontic
Humors, communicated to the *Ge-
nus nervosum* together with the
Blood and *Lympha*, by Circulation.
Also several strong Purgers taken in-
wardly, Antimonial Medicines
which are as bad as Poyson ; for by
means of the pricking of Antimo-
nial Particles, drank in the Infusi-
on of *Crocus Metallorum*, or *vitrum*

Antimonii, the Fibres both of the Stomach and also other *Viscera* and Parts, may be drawn together and twitched, which is the Reason that irregular Vomits often forerun Convulsions. For if an Acrimony happen to affect the nervous Part, the Crispation spoken of before begins by degrees, till it arrives at the Brain, and disturbs the Animal Spirits; so that it is plain by what has been said, That a Spasm does not so much, as the Ancients would have it, come from Empiriness, as an Acrimony which follows it; as we may see in an *Hypercatarrhis*; as the Excellent *Wedelius* observes in *Ephemer. German. An. 10. obs. 75.* nor do we excuse here any feculent, poisonous, tartarous, acid Humor, whether it be Phlegm, or Serum, or the *Succus pancreaticus*, according to that old Observation: *Acids are hurtful to the Nerves.* For this Reason those that have the Gout are so often vex'd with Spasms, as also Children, who, through eating too much, have either too viscous an Acid or Worms in their Stomach; as also those of riper Years, who drinking too much Rhenish Wine, for the sake of the grateful Gust of its Acidity, are punish'd with a Trembling; so that the Acid, to cause a Convulsion, must be somewhat more fix'd, grosser, and mixt with something moderately viscid; but it must not be a volatil Acid, for by running into the Pores of the Brain, it will rather and sooner produce an Epilepsy, than a Convulsion: Amongst remoter Causes we reckon all things which administer Acrimony enough to irritate the nervous Fibres, either by communicating it to them, or spending the gentle Humors, so as that the rest become sharper and

consequently more hurtful to the Nerves. We have seen this commonly happen to several Persons, by reason of the Quantity of the Salt; as we sadly saw in a Councillor's Lady of a very good Quality, who first vomited a great quantity of acid Phlegm, which was follow'd by a Convulsion of the Hands and Arms, together with very great pains of the Head, till the Acid was mitigated, when the Symptoms abated by Remedies, which I shall speak of hereafter, as the Disease was cur'd.

All sharp Poysons, Wounds, Bites of venomous or malicious Creatures, and prickings of the Skin, may cause this Disease. For Instance of this we knew in a young Apothecary, who had a finger of Wood struck into the middle Finger, which without any other poyson'd (for it was on the middle Finger where he was handling the Wood) which he taking no notice of, the next day it swell'd and grew very painful; upon which Consulting the following, he dy'd: so that the hostile Particles, or those Spasmodic very close in that remanent of my Texture, as they do in the inward nervous and the double Coat of the Stomach; and of that painful continuation of the Spasms, the Spirits may be forc'd; and a Spasm of the Stomach under the *Pylorus*, which produces spasmodic vomiting may follow. Nor do we doubt that all the parts of the Body, and the Nerves themselves, as the *Ventriculus*, *Folliculus Felleus*, Heart, Mesentery, Bladder, and those which have Nerves for the organs of Sensation, may be drawn together, and taken with a Spasm or

S. II. Prognostick.

WE now proceed to the Prognostick of this Distemper. A Spasm which comes by a Wound is very often mortal, as we have known in a Souldier about three years since; as also not long ago in a Country fellow, who was to be cur'd of a Rupture. The Case is also bad, if the Convulsion be caus'd by Hellebore or other strong Purges, as the great *Hippocrates* also testifies. That Spasm is also the more dangerous that comes from an *Hypercatharsis* and Profusion of Blood, together with a Weakness. And it will be hard to cure if it proceed from a burning and malignant Fever, so that it is better a Fever should come after a Convulsion, than a Convulsion after a Fever; because a Fever cures a Spasm, by removing the peccant matter; for he that is troubled with a Convulsion, or Distension of the Nerves, is cur'd if a Fever supervene.

Whoever are took with a *Tetanus* die in four days, but if they pass those well they are out of danger, as may be seen in *Hippocrates* his Aphorisms. If the Patient by being tir'd out with too frequent Tortures, and Convulsions, become like one distracted, so that he be speechless, want Strength, be spent with Sweats, and throw up what he drinks through his Nostrils; it is mortal. We have observ'd the Distortions of the Lips, Eyebrows, Eyes or Nose, in a continu'd Fever to be often signs of Death. The same Distemper ends in Death when the Matter is carried to the Brain; and a worse Distemper, as an Epilepsy or Apoplexy supervenes, and if the Strength be

spent. But *Hippocrates* will better unfold these Mysteries to you, to whom we refer you in his Aphorisms.

§. 12. Dietetick Cure.

Let us now expose our own Commodities, and give our Opinion, as to the Dietetick Cure.

1. Let the Air be temperate and clear, avoiding a North, Cold and Winter one. For *Hippocrates* has long since observ'd, That Cold causes Convulsions, Distensions of the Nerves, Blackness and Blewness and feverish Shiverings; and we also have caution'd it above. 2. Let their Meat be of good Juice, for which purpose Cream of Ptisan, perch'd-Eggs, Capons, Hens, Chickens, are good. Let them choose rather roast meat than boyl'd, and let Cephalicks be added to their meat, such as Marjoram, Sage, Thyme; also Raisins and Almonds are convenient. Let them avoid salt, acid, sharp, briny Meats; nor let them eat too much, so as that it cannot be digested, but turn to an acid, viscid Paste, whence must arise various Inconveniences. Let them also especially avoid all sowre Fruit. Let their Drink be Ale well wrought, brew'd with nervine Simples, such as Roots of Peony, Clove-gilly flowers, Leaves of Sage, Rosemary, Germander, or a Decoction of Barly, or Mead. Let the Patient forbear hard drinking: for all excessive eating and drinking is principally to be avoided as dangerous. 3. Rest must be enjoyn'd, and immoderate Motion must be forborn; but Frictions of the *Vertebra's* of the Neck, and other parts are allowed. 4. Let them sleep and watch mode-

ately; for else several Alarms in the Humors and Spirits. 5. Let their Excrements be as Nature requires, and other customary Evacuations all Obstructions of the Mesentery, Womb, Hamorrhoids, are hurtful; and on the other hand, all immoderate Evacuations are to be avoided, such as bleeding at the Womb, Hamorrhoids, Sweats, tharses, excessive Sweats, much use of Venerie, which disturbs the Spirits and produces upon irregular Motions, Poisons, strong Purges, as of Hellebore, Antimony, which tribute much, and after Evacuation, cause a sharpness in the Blood and Serum; the genus nervosum which produces Contractions. 6. Let them be always cheartful; for Contractions are very dangerous, amongst which Anger is the Cause of this Distension. Anger sharpens the Bile, which sharpens the Animal Spirit, which they become irascible, occasion this Disease, for reason *Helmont* attributes the effects of Vipers and venomous Creatures, to the passion that Anger makes in yet we do not here understand set down our own Sentiments, rather admire the Industry of others in this work: For it is a great matter to us, when Cholera, through Accident, is only Part of the Blood in the Heart, in some measure dissolved by Salt which dissolves in the Fright, Fear, Melancholy may easily cause this Distension, disturbing the Animal Spirit, which I lately observ'd

Quality, who with the Grief she seiz'd with, for the Death of a Relation, had many violent modick Fits.

§. 13.

The Ancients thinking, that a Spasm comes chiefly through the influx of cold Humors, first open the Belly with a Clyster, then prepare the Humors by the Medicines; after that carry them off by Purgers; such as Turbith with Rhubarb, Agard and its Infusion, *Pilula cochiae*, *de Sagapeno*, *de Opopanace*, &c. Of these they usually make divers Compositions and Forms, which would both be tedious and long to set down here. After they prescribe things to divert the Humors from the part affected; such as Emulsions, Ligatures, Blisters, Sternatories, Gargarisms, Clysters, and Plegmatisms. Last of all they prescribe things to carry off the Humors and strengthen the nervous Parts. Their Corroboratives are, *Confectio anacardina*, *Mixtura*, *Diamuscum dulce*, *Acorus*, *Opopanax*, &c.

Among Externals they reckon aromatick Oyls both boyled and distilled; for instance, Oyl of Lilies, of the Philosophers, *tribus*, Fat of Hens, Man's, &c. Whelps cut open and Lungs taken out of Creatures, are applied to the distended part, while they are hot: And cut the convulse parts into Oyl, that they may recover. They use Skins of Foxes, Sheep and Wolves, to cover and warm the convulse Parts. They commend Baths, whether they be Artificial or Natural; to wit,

whether they be sulphureous, bituminous, salt or aluminous; in defect of which they use to make one of Sage, Betony, Mallows, Wormwood, Rue, Marjoram, Penny-royal, Chamomil, Roots of white Lily, Seed of Fœnu-greek, Line, and Minerals, Sulphur and Alum. Then they cup and scarify the hind part of the Head and Neck.

§. 14.

The Paracelsians give Medicines to open the Pores, Heaters, Moistners of the Arteries and Nerves, not by any external quality, but by their specifick Form. And so Paracelsus himself, because with him a Contracture is a Disease in the highest degree, will have the Medicines to be exalted and made spiritual in the same degree. Upon which he gives two Cures; one Internal; another External. The Internal is performed by Purgers and Strengtheners, to cause the Humor of Life to encrease and abound, so as that it may be able to expel the Disease; such as *Aurum potabile*, Essence of Gold; Pearl, Antimony, *Arcanum Sulphuris*, *Aqua vite*, Oyl of Vitriol, Water of Tartar, Quintessence of Coral; Essence of Castor, drawn with Spirit of Wine, is given with good Success in a Decoction of aromatick Herbs.

The External Cure is performed with the things following. Fumes of Mastich and Juniper, Oyl of Turpentine, Bays, Frogs, &c. Gum Galbanum, Ivy, Ammoniack, *Opopanax*, Fat of Foxes, Deer, Badgers, Mouse of the Alps, Goats, Cars, Bears, &c. are good. They commend Oyl of Serpents, and of the Philosophers; because they make

the Body nimble and healthy. *L. 3. de morb. metall.* he commends curing by *Mercury*, and a Bath of Agrimony, Flowers and Roots of Lily *Convall.* Swallows, with a little burnt Egg-shells. After bathing they anoint the Limbs with this or the like Liniment.

Take of Fat of Foxes boyled out one Pound, add of Castor distilled five Ounces, Turpentine distilled with Pepper, *Cantharides* and Bay-berries, seven Ounces and an half. Mix them on a fire.

It is good to anoint with Oyl of *Euphorbium*. *Paracelsus* highly commends the little triangular Bone, which sometimes, though seldom, uses to form the double Lamdoeidal Suture. Somewhere he commends distilled Oyl of Masterwort Root, and in another place he advises the Flowers of Antimony corrected. But who can recount them all?

§. 15.

Helmont and his Followers cure either by asswaging the furious *Archæus* (who they say is peccant in this Disease) with Man's Grease, or by mortifying him with strong Ligatures, or by removing Malignity from the Spirits; all which things Opiates do perform, both taken inwardly and applied outwardly. Here is a Receipt.

Take of the best Spirit of Wine one Ounce, *Opium Thebaicum* one Drachm and an half, Camphore twelve Grains, Castor one Drachm. Mix them for External Application.

§. 16.

Willis, as was said before, an Epilepsy a little on, and observes the same a manner, which he does in Epilepsy, that is, he gives Vomits, divers altering Empirical, and Chirurgical of Harts-horn, Man's Blood, Sal Ammoniac, aromatick Herbs distilled thousand such like things, has in an excellent piece *Convulsivis*, out of which numerous Physician may pick Remedies.

He says likewise, that Blisters applied to the behind the Ears are proper abundance of serous and mors are drawn from Moreover, Sneezers and phlegmatisms do often afford great Relief. He repetition of bleeding in the rhoids or Foot. When is violent he loves to fters and Cataplasms to the Feet. He claps Epip the Calves of the Legs, Thighs.

§. 17.

Sylvius in the Cure of a plorable Disease, as follows *Paræus*, exactly applies *Emplastrum teos*, melted with Oyl and he gives better reason he does, than *Paræus* Author judges. That the Muscles, which are the stretch, are slackened. He also approves *Paræus* commends, and

because it presses the over-
stretched Muscles, and gently hin-
ders them from a hurtful distensi-
on of the Fibres, and it may be
an incurable Rupture of them.
It does not concern the fol-
lowing Cataplasim, which *Parvus*
to *Charles* the Ninth King
of France.

of Flower of Barley, bitter
each two Ounces, Flowers
Chamomil, Melilot each two
Ounces, fresh Butter an Ounce
or an half, a Barber's Lather
is sufficient. Mix them.

If the Pain will not abate
the use of these things, he
Parvus flies to Oyl of Tur-
key, and Spirit of Wine mixt
warm, or to cutting off a Nerve,
or a Membrane. Thus much
of the externals, when a Convulsion
arises from the pricking of a Nerve,
or an Ulcer or *Fistula*, or such
cause. The Internals in this
case are Sudorificks consisting of a
Salt, such as Spirit of Tar-
treacle-Water without the
other things, which I
do not here mention. If this
arise from Wounds or Blows
on the Head, the fragments of the
Skull, supposing there be any,
must be taken out; for which pur-
pose if there be no other way to
bring them out, a Trepan must be
used, for when the Skull is open-
ed, they may be taken out,
and when this is done, Oyl of Tur-
key mixt with Spirit of Wine,
must be poured into the Wound.
If the Convulsion come from
the Brain, then he advises Oyl of
Rape seed by expression.
Of general Remedies (for we
had the special before) he

reckons sulphureous Baths, because
they are able to penetrate the deep-
est to the parts affected; in defect
of which he would have a Bath
made of Salt of Tartar well calci-
ned with Sulphur, boyled in Spring
Water. After bathing he is for ha-
ving Man's Grease, Fat of Eels,
and Oyls applied, because by their
means he thinks the Acrimony of
the lixivious Salt and acid Spirit, or
the Causes of Pain and Convulsions
is corrected. He commends Fomen-
tations of heating aromattick Plants,
hot Plasters and Cataplasims, which
as briefly as may be we have reck-
oned up.

§. 18.

THE *Cartesians*, because they
say, a Cramp arises from a
cold Humor or Wind causing Ob-
structions in the Vessels, are of opi-
nion, That all De-obstruents and Dis-
cussers of Wind are good, whether
Internal or External, volatil Salts,
and other Cephalicks, of which
we have abundantly treated in the
Chapter of the Epilepsy, and there-
fore, are loth to repeat them.

§. 19.

SO others judge of the Cure.
This Method pleases *Us*, name-
ly, we think that Purgers are
good, if so be a preparation of the
Humors have preceeded, which is
the only thing, and can only be
expected from spirituous Medicines,
because this Disease proceeds from
a Perturbation and Explosion of the
animal Spirits in the Humors, and
all other ill Qualities in the Hu-
mors should be corrected by sweet-
ning, spirituous things; after which
all Functions proceed the better.

If therefore the Patient have opportunity, and his Strength and Disease will admit of purging, to carry off the sharp, bilious, pottick, and tartarous Matter, we may take any of these things following, Rhubarb, Senna, Tamarinds, and other gentle things; but if the fixtness of the Matter require stronger Medicines, we should chiefly advise *Mercurius dulcis* from a Scruple to half a Drachm given in Conserve of Roses, or the following Physick Wine.

Take of Leaves of Betony, Germanander, Ground-pine, Rosemary each half an handful, Flowers of Lily *Convall.* Cowslips, each two Pugils, Roots of Peony, Liquorice each three Drachms, Leaves of Senna two Ounces, yellow Rhubarb three Drachms, Seeds of Fœnil, Coriander, Anise each one Drachm and an half, Cream of crude Tartar two Drachms. Cut them and put them in a Bag for a measure of Wine.

Sometimes to root out the Disease, I have given a Vomit of emetick Tartar of *Mynsicht*, or of *Ludovicus* from two to three Grains; especially if a viscid Acid be lodged in the inner Coat of the Stomach, and if the Disease have been of long continuance, and become in a manner habitual: But if the Strength will not bear it, or any other circumstances dissuade it, I think strong Purgers should be omitted, and that a Clyster may be given instead thereof. These things premised, at the Coming and in the Progress of every spasmodick Contraction, it should be our care, That the irritation of the nervous Fi-

bres, and the two impetuous flux of animal Spirits may be dulcified, which we may obtain by dulcifiers, such as Spirit of Ants, with their Eggs beat with them, Spirit of Harts-horn, Man's Blood, *Stara cephalica* *Cnassellus*, *nanimitatis*, *arcantum cephalicum*, *essentia cephalica* and several other things have almost the same effect. Medicines, that do the same are made of fixt, cephalicatives, and sometimes of ones, which are usually given and after vomiting, and a good success be used to an acid or a sharp; and this effect of theirs, that they soak up what is morbid in weaker Persons are Crab-apples, Sows, Worms, *Althea* fixt and lixivious Sales and *Tartarus viriolatus*; for filings of Steel; for rich der People, Essence of Mars with juice of sweet Ani- triol of Mars, *spiritus vitæ cum urina humana* &c. are every while these. In a word, all antispasmodicks do the same under which we comprehend *phur antimonii auratum*, precipitated from the drois- gulus of Antimony with Sal Ammoniack, *Glauber's* of Antimony, called his *specificum cephalicum* *Johannæ cinnabaris solaris* *Sebastiæ* our Antispasmodick follows.

Take of native Cambray Drachm, Magistery of Mars Drachm, Man's Skull of Amber each one Drachm

half, Ashes of Swallows and
ples, red Coral, Pearl each
o Scruples, Sugar of Pearl
ree Drachms. Mix them.
ke an antispasmodick Pow-

have done wonders with this,
ound it twice as strong as the
stan antispasmodick Powder.
ng Liquids these excel; *Liquor*
cervi succinatus, *Balsamus ner-*
Schefferi, *Spiritus antiepilepti-*
ster, &c. A Spasm cannot o-
wise be cured than by discus-
the Humors and Spirits by in-
le Transpiration, or unless
plenty of Spirits be sent to the
e, that at length the Valves,
violently pulled back may
er their natural State. But if
Spasm arise from a scorbutick
, we use to mix Antiscorbu-
with Antispasmodicks; for
ce, our Antispasmodick Es-
, or let it be this or the like
ed Water which follows,

of *Diafcardium* one Ounce
dan half, Flowers of Line tree,
aves of Germander each three
ndfuls, wild Rue one handful,
vings of Elks-horn half an
nce, decoction of Sarsa Root,
ce of Brook-lime each two
unds. Add of our spasm-
ck Powder six Drachms. Mix
d destil them in glass Vessels.
d of the Tincture of Peony,
f an Ounce. Mix them.

the Patient's Complexion be
too bilious, a most Excellent
er may be destilled of Tansy,
great deal of that Herb be put
little Water, and destilled ac-
ing to Art; this Water speci-
ly cures the Convulsion, so do

Oyl and Spirit of Saffron and Saf-
fron in Substance, Oyl of Lavender,
Juniper and Amber, and all things
that are good in soporous Diseases,
especially in a Palsy, except sharp
things, are good here. In a trem-
bling this following will be Excel-
lent.

Take of Spirit of Sage two Drachms,
Essence of Castor one Drachm.
Mix them. The Dose thirty
Drops.

But if this Disease proceed from
the Womb, or if the Stomach be
convulse after eating poisonous
Meats, that is, Mushrooms and
such things, Vomits are proper.
If the vomiting come of it self,
Medicines made of Castor and Cin-
nabar must be prescribed, and at
length safety must be sought from
Opates. In all Contractions of
the Nerves we use *laudanum cydonia-*
tum in *Hoffmannus* his *Clavis phar-*
maceutica Scroderiana, so that after
a moderate Dose of Anodyne
has given rest, Strength returns to
Body and Mind; all sharp things
are sweetned, &c. Yet some quar-
relsome, ignorant Physicians blame
these Medicines, and had rather let
their Patient die than yield to
sound Reason and Experience, and
so save his Life; but *Ignoti nulla*
cupido. For *Opium* checks the im-
petuosity of the Spirits, as its
known effects in our Bodies, Somo-
lence and Indolence do testify; and
when the Tone of the sensible Fi-
bres grows flaccid, they are not so
easily moved, though the Object
be stronger, nor is the Impression
on the first Sensory sufficient to
cause Pain or convulsive Tension.
Where ever therefore Crisptions
and spasmodick Contractions are,

the foresaid Opiates are proper, such as *laudanum opium*, *theriaca celestis*, *tinctura anodyna Wedelii*, &c., because they more or less stay the Motion of the Animal Spirits, and correct an Acid: for we consider the Acid, though but little in quantity, which pricks, gnaws, and painfully irritates the nervous and fibrous Parts, whence sometimes several Symptoms follow, all which Opiates appease. I have sometimes seen a Convulsion come from a preposterous cutting for a Rupture, or from other Wounds; so that often Patients die like People strangled; for the Muscles of the Jaws are convulse on both sides, and the Teeth set, so that though they be miserably hungry and thirsty, they can swallow nothing, while the Neck continues stiff, and their Pulse equal and strong, till the Pulse intermits and grows swifter, and Death puts an end to the story. I observed such a case only through Grief, and taking of a strong Purge in a subject predisposed. Yet I have known cases wherein I have given Medicines with success, one of which is this following; namely, *Liquor cornu cervi succinatus*, *terebinthinatus*, Oyl of Lavender, Spike, &c. Externally I have used divers hot Cataplasms, vulnerary Balsams, and that of *Sylvius*, Oyl of Turpentine mixt with Wine; by which Remedies the Spirits were appeased, and the Patient saved. In a *Spasmus cynicus*, Oyl of Turpentine diluted with *Aqua Vitæ* is effectual Inwardly and Outwardly. A Cramp in the Calves of the Legs may easily be cured by Oyl of Bays, Lavender, or Turpentine heated at the fire, tying them with hot swathing bands afterwards. If a Convulsion come from the bite of any vene-

mous Creature, the Wound be dilated, and a Blister applied to the grieved Part, some days Treacle or Mithridate dissolved in *Aqua Vitæ* must be to the Wound. If it proceed from pricking a Nerve, then the wound must be enlarged and Oyl of Turpentine dropt into it. But in a rare case the Nerve must be cut off. The famous *Officer* saw a Witch cure a convulsion by tying a flaxen cloth about the Part: but I believe came from a supernatural Cause, you may see in *Tract. de medicis. p. m. 167*. But upon good grounds I advise, as *Sylvius* saith, sulphureous Baths, either Natural or Artificial, which very much dissipate the viscid and spasmodick Acid or Sharp oily Particles. I have experienced them in Princes, who were cured with this Disease. You may see the Materials of Artificial Baths before. I can upon my own experience testify, That Oyl of Turpentine found in Horse-dung, is good to anoint withal. I think we should not neglect any aromatick such as Oyl of Turpentine, and Amber, all which are good for convulsions, especially if they be mixed with volatil Salts. As for Eels, Man, Duck and Goose, as much as they rather obstruct the Pores of the Skin, they should be omitted. I prefer before them spiritous mixt with oily ones, rather than topical, convulsive Spirits, &c. follows, and may be added to the external Cure.

Take of Spirit of *Ammoniac*,
Beetles, Sows, &c.
likewise good external

As for chirurgical Means, we must use Venesection with Caution, unless there be a *Plethora*, I think it were best to omit it. But if any thing necessary should be attempted, Cupping may supply it, either dry or scarified, and the Glasses must be set near to the convulse Part. I reject Blisters, Issues, *Dropaces* and Apisims, and instead thereof use Gregorick and nervine Medecines; which we have said enough. Applications are very good in this case, because they pull back the selves, especially if they be performed with the following, or some such Liniment.

Take of Oyl of Earthworms one Ounce, Nutmegs by expression, Majoran, Cloves each half a Scruple, *Venice Treacle* two Drachms, Saffron one Scruple. Mix them

on a good fire. Anoint the Spine and Neck.

In a windy Spasm this following is best of all.

Take of Treacle one Drachm, Spirit of Juniper two Drachms. Mix them. Or,

Take of Goose grease fresh two Ounces, Oyl of Cloves six Drops, Cinnamon three Drops. Mix them.

In a trembling, for Outward Application ;

Take of *Aqua ad articulos* two Ounces and an half, Spirit of Worms one Ounce and an half, Ants six Drachms, Essence of Castor three Drachms, Mix them.

CHAP.

C H A P. XIII.

Of the Incubus, or Night-Mare.

§. I.

AN *Incubus* (ab *incumbendo* from lying upon, ἐπιάλτης ἀπὸ τῆ ἐπιάλλεσθαι, from *leaping upon*; some call it a *Nocturnal Asthma*, ἐκβολή, or *Invasion*; *Piso* calls it a *Nocturnal Suffocation or Suppression*; the English term it the *Night Mare*) is a Disease, wherein a man thinks himself smothered by a great weight lying upon him in his Sleep (therefore *Sylvius lib. 2. Prax. cap. 25. §. 27.* calls it a kind of *Dream*) with a great difficulty of speaking and breathing. The common people think this Disease is caused by some Devil or Spirit leaping upon a man, and so they have made the *Fauni* and *Satyri*. Authors of this Disease; concerning which *Caspar Scottus lib. 1. Phys. curios. c. 21* is worth ones reading. *St. Augustine lib. 15. de civitate Dei* makes mention of them. And so *Pliny lib. 25. c. 4.* calls this Disease *Iudibria Faunorum*; But this opinion is refuted by *Willis c. 6.*

de Incubo, as false and ridiculous. So likewise *Aëtius* from *P. 1. 6. 12.* writes, That an *Incubus* is not a Devil, but rather a *falling Sickness*, or *Apoplexy*. We shall therefore pass by these Fictions of a Devil, and discourse of the *Incubus* which proceeds from natural Causes preternaturally. As I am writing these things, comes into my Mind, a rare very proper to illustrate the definition I have given, of a *Man*, who every night while asleep, finds a sensible sucking his Paps, just as if a Child sucking a Woman's Breast, which was most admirable, his Nipples swelled upon it, one shall not ordinarily meet in the masculine Sex; and when he feels this sucking he cannot resist. Now it is as clear as the Sun, the definition laid down, the sort of *Incubus*, since breath hindred and a weight felt lying upon him; of which we shall

Reason when we come to the Causes.

Definition.

AN Incubus therefore, if a man would be exact, is an extreme diminution of Animal Motion in parts serving for Speech and Respiration, especially of those Nerves they call Phrenick and Recurrent, depending upon the stoppage of the Spirits influx through them, with a false imagination of a heavy weight lying like a Ghost upon a Man's Breast. It comes most usually in ones sleep; yet there is a rare instance of one that came upon a Professor of Divinity, while he was awake, in *Smetius Miscellan. lib. 10.* and another of *Masfarias in Rhodius, cent. 1. obs. 54.* It comes generally when the Stomach is full of hard Meats, and when one lies on his back. In persons predisposed to it, when they awake their motive Faculty returns, a Pain, Anxiety and Palpitation of the Heart remaining, and oftentimes also a quick and violent Vibration of the Diaphragm.

§. 2. Part affected.

THE Ancients think, That here sometimes the parts of the Brain, sometimes of the Breast, are affected, because they hold, that all Sense and Motion proceed from the Brain, as from the Seat of the Animal Spirits, and the Beginning of the Nerves. And *Willis* observing this, although he will have the *Præcordia* truly to be affected; yet he proves by many Arguments, That the Seat of an Incubus is in the *Cerebellum*, where

the first Spring of Animal Spirits is, especially because by the Animal Spirits being tied or suppressed in the *Cerebellum*, a failure of them is caused as to the exercise of the vital Function. *Helmont* in this, as in all other soporous Diseases, blames the *Præcordia*. Some Practitioners make the Brain and its hind passages, which tend to the spinal Marrow, the primary subject of this Disease. But *Willis* blame the *Cerebellum* with its passages, in which the Animal Spirits run up and down, and here especially the Nerves arising from thence, called Phrenick and Recurrent, which govern the Animal Spirits in the Breast, and serve for Respiration. For in an Incubus the Brain is not affected alone, but the mischief lies rather in the Muscles and Nerves, that serve for Respiration. *Sylvius* therefore makes no scruple to rank this Disease among *Asthma's*, and *Platerus prax. l. 1. c. 4.* and *Willis* in the place forequoted acknowledge as much. They verily perswade themselves that the *Præcordia* are affected, in as much as when the Patient is newly awaked, he finds a heaviness in his Breast, and when that is gone, a palpitation and quivering of the Diaphragm, and disorderly Motions succeed. But without all doubt, the Heart, the Lungs, and their Vessels, the Muscles of the Breast, the Diaphragm, the pneumonick Vessels with the nervous Fibres and Glands, and the Organs pertaining to Speech, are affected in this Disease. But if one would but rightly distinguish between the Subject of the Disease and of the Cause, most of the difficulty about this matter might be removed: about which we shall speak more

more fully and accurately, when we come to the Causes.

§. 3. Diagnostick.

THough the foresaid Definition contain the greatest share of the pathognomonick Signs, yet the Diagnostick deserves a more Particular Consideration. For according to that of Cicero's, *The foundation of good Counsel is to know the Commonwealth, so the beginning of Cure is the knowledge of the Disease.* In this Disease therefore we feel a weight about the Heart, and imagine it lies upon us. Now this weight and immobility of the Breast and the whole Body proceeds only from stopping of the Influx of the Animal Spirits into the Muscles of the Breast and Heart. For the Blood in the Heart, by reason of the influx of the Animal Spirits being denied, and thereupon the act of Respiration being hindred, and the Motion of the Diaphragm, being, as it were, suspended, cannot move nor be ventilated, but must of necessity stagnate: Then it coagulates, and when it is coagulated, anxieties of Heart, tremblings and other Grievances must needs arise, and though the Patients would call aloud for help, they cannot do it; for sometimes their Speech is abated, sometimes quite lost, because the recurrent Nerves are hurt. A torpid Sense in sleep also attends it, and an imagination of smothering, and as it were of a *Catalepsis* coming upon one. Their Phancy also is disturbed, so that they have an Opinion sometimes that the Devil, some Witch or Giant has or would have carnally to do with them. Because when the passages of the

Spirits to the Heart are stoppt, they are enraged, return to the Heart, and there form ill *Idæa's*, such as they had formerly conceived of the Devil, Witches, Giants or Vampires. And this disturbance of Imagination often befalls Witches and Vampires, who are often affected with Illusions of Phancy, like the Dreams, and imagine several things which they verily think befall them; for instance, that they were in a field, and danced with the King, the Devil, and all his Tribe, which are nothing more than their Whimsies, as may appear hence, That Witches close their Eyes and asleep in their Chamber, oftentimes lying by their Husbands, have told in the morning how they were dancing in the fields, and they were never out of their Chamber. But since this is out of our province, we will return to our proper Business. Patients, when they are awake, complain much of a weight and heavy weight, and tell of several other things, yet so as that they know their Breath and Speech are stoppt, and the Motion of the Body some way or other hindred. Also when they have been sleeping, they yet feel a palpitacion and trembling of the Heart, because when the Heart and Diaphragm have been hindred in their Motion, and sleep is over, afterwards the Spirits coming in greater plenty, and being rendered more active, exceed in the performance of their Office; which Motion is Trepidation and Vibration of the ingenious *Ullis* well expressed by a bended Rod's returning to its straightness by its elastick Motion. In some scorbatick persons, where there is a scorbatick discrasy of Blood, prone to Coagulation, there

avid and violet coloured Spots. When Men have had several Fits, they complain of a heaviness and swimming in their Head, and of several other little things, which I have not leisure now to enumerate.

§. 4 Cause.

Now we have done with the Diagnostick, the next thing is the consideration of the Causes, benefit whereof we may successfully undertake the Cure of sick persons. The Ancients think, That the Cause of this Disease is either old Phlegm, or melancholick Blood in the *Præcordia* and Veins of the Breast; and they earnestly contend, That gross vapors are elevated to the Brain from the foresaid humors, and that the Passages of the Breath are stop't by them. Or, say they, whenever many gross vapors arise from surfeiting with bad Meat, not well digested in the Stomach, or from any of the other Ways, and the *Hypochondria*, in the Breast and Diaphragm are pressed, upon which a Man can scarce breathe, but fears he shall be suffocated; which vapors (so they say) are sent to the Brain; and then they persuade themselves the Mind it self is disturbed, and filled with sad *Speetra*.

§. 5.

The *Paracelsists* and others of their gang. do here, as in other soporose Diseases, blame a stordick Sulphur, and narcotick humors, that obstruct the Phrenick Recurrent Nerves, and fix the Animal Spirits.

§. 6.

Helmont rejects all gross Vapors of the ignorant Academics, and proves, That rather the Action of the regiment of the dumvirate, namely some impediment in the Stomach, by its virul regiment alone, without Vapors and Fumes, to disturb the Brain and Nerves, vitiates the first Conceptions, as it interrupts the comforts of the Spleen.

§. 7.

The Famous *Willis* makes the immediate, proximate Cause of this Disease to be the hindrance of the influx of the Animal Spirits into the *Præcordia*; and the mediate Cause to be some incongruous Matter, instilled with the nervous Juice into the *Cerebellum*, which creates a stupefaction of the Spirits in their first Source, and immediately compels them to cease a little from the performance of their Functions. And he derives that weight on the Breast from the Blood's stagnating a while in the Heart, and he solves the inability of Motion, by the irradiation of the Animal Spirits being hindred.

§. 8.

The diligent *Sylvius* makes the primary Cause to be Vapors, causing a slight stupefaction, and occasioning a small *Delirium*. And thus he will have the Cause of an *Incubus* wholly to proceed from a corporeal Fault, and by no means from the Soul.

§. 9.

§. 9.

Cartes agrees with the rest of the reformed Philosophers, and owns, That the influx of the Animal Spirits into the Nerves and Muscles allotted to the Organs of Respiration, is the immediate Cause of this Disease. For in sleep, if the Animal Spirits flow not into the Muscles, the Soul judges in such a Case according to Custom, as if a weight lay upon one, and hindred the free Motion of the Diaphragm. Choaking comes, when the Spirits flow not freely into the Muscles of the Jaws; for then they fall together, and so cause strangling. Spirits also fail when the Circulation of the Blood is hindred; and when the Spirits do not flow into the Muscles of the breast, its Motion must necessarily cease, as Sails flag for want of Wind. And they think, that this Disease comes, when some gross Vapor has filled the *Abdomen*, which cannot get out for its thickness, but when it is heated distends the whole *Abdomen*, which presses so upon the Diaphragm, that it cannot play downwards, especially in sleep, where the influx of Animal Spirits is small. And also when the *Abdomen* does not play, little Air gets into the Lungs, so the Blood is not cooled as it used to be, but is carried hot to the left Ventricle of the Heart; here-upon the Ebullition is greater, and more gushes into the Arteries, and so more than usual is carried to the Head, whereby the Spirits are moved disorderly in the Brain, and represent confused Imaginations to the Soul.

§. 10.

Now you shall have my Opinion. And I think the immediate Cause of this Disease is A stoppage of the Influx of Animal Spirits; not total, for it would be an Apoplexy; but an impediment of the Influx, not so much in the original Cause, the insertion of the Phrenic Recurrent Nerves, that reach the Diaphragm, whence a dangerous Stagnation of the Blood in the *Præcordia* proceeds. For when it moves it grows acid. This is the Cause of an excessive Acid known *Coagulum* of the Blood, which is often the sole Cause of this Disease. There is an Acid in the Spirits; whose action is checked by crude, acid, choleous parts; communicating a superabundance of Crude, sour to the Blood and Spirits in liquor. Wherefore this Disease happens usually after eating of things that are improper, difficult of digestion, sour, salt, and full of fixt Particles; especially if the Blood be as full of heterogeneous saline fixt Particles that clog the fore-said Nerves. Hence Children are oftner troubled with this Disease than grown Persons; they suck greedily, and are voracious; in as much as the Acid, by reason of a vicious residing in the Stomach, is corrupted, and crude Matter is carried to the Blood. And this is also in grown persons also arises usually from Error in Diet; or through bad and hard Food, the body abound with gross humors, horrid Dreams, Goblins, Harpy's, gasty Faces and

present themselves; sometimes one at Law with his Adversary, sometimes in Combat, Houses are on a Man thinks he is tumbling the Dirt, and that he has a weight upon him, or that he is hanging in some high and dangerous place. Persons predisposed to this Disease are subject to it in a certain posture of lying, that on their Back: the reason is because in such a posture theumatick Nerves and Muscles sometimes straitned and compressed, and then the Animal Spirits cannot flow into the Breast and Diaphragm, upon which this Disturbance of necessity ensue. Really also a viscid and coagulated Blood, which clogs and obstructs the Lungs and Nerves, and creates a great uneasiness to the Spirits, may contribute to it.

§. II. Cause.

The nature of the *Incubus* and the Patient determine the Prognostick. An *Incubus* is seldom mortal. Children and such on a gross Diet, are more subject to it than grown persons and use a thin one. If other Symptoms of the Head have preceeded, and if the Fit return often, it threatens either an Apoplexy, Palsy or Epilepsy, and sometimes Madness, hypochondriack Cholery, or sudden Death. Several have been carried off by this Disease, while they were in manner of a suffocative Fit. If it grow worse, and if a Man in the night, either awake or asleep, if after he is a Convulsion or Swooning, or if cold sweats and tremors of the Heart come, it is a bad

§. 12. Dietetick Cure.

IN the dietetick Cure the *Air* has the first place. And in this Disease a hot and clear one must be chosen; but a cold one, which stops and straitens all the Pores must be avoided.

The *Meat* must be of laudable Nourishment. For if such be eaten, if the Stomach do its office aright, and if it send the Juice of the pure Aliment to make Blood, pure Spirits of life are bred, which then being carried to the Brain by the Conduits of the Carotid Arteries, yield matter for the Animal Spirits, which going thence by the Nerves into the whole Body, govern Sense and Motion, Imagination and Understanding. If therefore a gross and seculent Blood come from bad Food; if fermentation be frustrated in hard Meat, impure Spirits arise from the Heart into the Brain, which overthrow the state both of the Mind and Body. In this Disease especially forbear immoderate eating.

Let the *Drink* be small *Neccarine* or *Moselle* Wine, or *Hirstein* or *Michelbach* Wine; or Beer well boyled, wrought and settled.

Non acidum sapiat cerevisia, sit bene clara,

Ex granis sit cocta bonis, satis ac veterata.

Forbear drinking of Water; for a thick and troubled Water is very prejudicial to Health, it breeds Phlegm, and sometimes causes an *Incubus*. Therefore the Fens and Marshes of *Holland* must needs be guilty of a great deal of Sickness, where the Waters look troubled, and

and are of an ingrateful Taste and Smell, or frozen all Winter, and boyling hot all Summer, and always standing still. Nor is Rain-Water, kept in Cisterns, much wholsomer, it being infamous for breeding of Worms. And I make no question, but abundance of Inconveniences arise from drinking of Water. For I have often met with this Disease among Country People, and I ascribe it much to drinking of Water. For according to this Verse;

*Potus aqua sumptus comedenti incommoda praestat,
Hinc friget stomachus, crudus & inde cibus.*

The most spirituous things do most refresh the Body; and so drinking of Wine is most wholsom, according to the following Verse.

*Vina bibant homines, animantia cetera fontes,
Absit ab humana pectore potus aqua.*

For Wine, because it easily turns to the nature of Blood, the Aliment being carried into every part of the Body, breeds Spirits that are clear, and not thick, restores them, when dull and languid, strengthens the Heart, cheers the Mind, and quickens the Understanding and Senses.

Let Motion and Rest be moderate, otherwise they may occasion this Disease, since by too much Motion the Spirits are dissipated, the solid parts are consumed, and preposterous, crude Chyle distributed to the Blood. For it forces the Chyle, before it be well dige-

sted, out of the Stomach into Guts, and out of them into lacteal Veins and Glands into Mesentery, and in this manner breeds Crudities, from whence numerous Diseases, especially of ours, proceed.

Moderate Sleeping and Waking are commendable. Sleeping the day, especially after Meals, lying on ones back is to be avoided, Watching if it exceeds its bounds, dissipates the Spirits and breeds Crudities.

The Excrements of the Body, the Menstrua, and other Evacuations, must correspond to the Art or Nature, otherwise they might greatly incommode Health.

The Mind must be kept from the contrary Cares must be avoided, and Grief and Sorrow, which the Animal Spirits are diverted from performing their Functions, and the Motion of the Blood, the Praecordia and Heart, as any one, who has been Sick, may observe.

§. 13. Pharmaceutica.

Let us now see, what Practitioners will perform the Cure of this Disease after their usual manner, Preparers; such as Syrup, French Marjoram, Mint, Oxy-mel simple, Wormwood, Marjoram, Bala-mitory, a Decoction of Rosemary, Parsly, Rosemary, Maiden-hair, Flowers of Violets, of Caper Root, Liqueur. They use these last, to find the Patient about the Phlegm; and Syrups of Apples, &c. when Melancholy bounds. Then they use

which are *Pilula cochia*, de *alico*, *massichina*, de *lapide Lazuliera picra Galeni*, *cassia fistula*, *zababylon*, *diasenna*. They ad- of bleeding, if the Body be thorick, or if the *Menses* or hemorrhoids be retained contrary Custom; and the thicker they the Blood, the more they take y: They use to bleed a Vein er the Tongue or in the Fore- d. Afterwards they fly to Re- ents, such as sharp Clysters, opping-Glasses set to the Thighs, ning the Hemorrhoids, rub- ing and combing the Head, gentle nines, Gargarisms, Apophleg- isms, Sternutatories, &c. Things t hinder Vapors from ascending, according to them, *Diarrhodon* *atis*, *diamargariton frigidum*. Su- of Roses, Coral, &c. Then y conclude the Cure with engthners, to wit, Treacle, Mi- date, *Diamoschu dulce*, *Dianthos*, serve of Rosemary-Flowers, loss, Seeds and Roots of Peo- Nutmeg. They magnify a- ting of the Head, Breast and mach with Oyl of Chamomil, and Wine hot. They advise the applying of a *Dropax*, made ve parts Pitch, and one Oyl of ke or Mastich. They commend s made of Flowers of Bugtoss, lers, Roses. Leaves of Baum, &c. ch may be besprinkled with te Wine and Baum-Water, mo- ately warm. A Cap may be e of leaves of Betony, Marjo- Flowers of Rosemary, Red es, Cloves, Nutmeg, Cypress- t, &c.

§. 14.

Petraccius and his Followers use to cure an Apoplexy, a Palsy and this Disease all in a man- ner the same way; and to that purpose they give several Purges, to wit, Extract of black Hellebore; *Panchymagogum Crollii*, &c. At length, when the peccant Matter of the *Incubus* is cast out, they fly to spi- rituous, strengthening things; they especially extol *Aurum potabile*, Oyl of Amber, Pepper and Juniper, inwardly and outwardly; and there are several other things which are sufficiently recounted before in so- porous Diseases.

§. 15.

Elment, because he thinks the Cause of this Disease lies in the Stomach, advises to vo- miting, that the Crudities of the Stomach, arising from Surfeiting or any other Cause, may be cast off. The Patient should be presently a- wakened in the Paroxysm, then the *Incubus* ceases, and the *Archæus* h a his desire.

§. 16.

Allis commends Cepha- licks, Nervines, and other Medicines, such as Amber, Coral, Pearl, Peony Root; also Electua- ries, distilled Waters, Tinctures, Elixirs, &c. sufficiently enumera- ted in the former Chapters. He would have Children, that are at any time troubled with this Disease, wear Coral and Peony Roots and Seeds about their Neck, or upon the pit of their Stomach.

§. 17.

Sylvius, that Successful Practitioner, takes the Cure of the *Incubus* to consist, 1. In the Correction of the Bile, that has a narcotick Faculty in it. 2. In the Correction of thick Phlegm, and the austere Humor, whether it be the pancreatick Juice, or any other that produces noxious Exhalations. 3. In the Discussion of austere bilious Humors, that arise in the time of the Fit. 4. In the Interruption of sleep. Things that correct the narcotick Virtue of the Bile, are acid, but spirituous, such as Spirit of Nitre, as well pure as sweet, Medicines of Castor, Vinegar, &c. For inciding thick Phlegm, correcting any austere Humors, and discussing austere bilious Humors, he commends all volatil Salts. For the Interruption of Sleep, he advises talking of the by-standers with the Patient, if at any time one find by Signs and Commotions, that a Fit is coming.

§. 18.

The Cartesian Indications are satisfied by volatil things, joyned with other spirituous things, aromatics, and several hard things, which may incide and extenuate, and so remove the Obstruction of the Pores of the Diaphragm, which we shall not here insist upon.

§. 19.

We shall now give you succinctly our own Method of Cure. In the time of our Practice we have had only three ephitack Persons to cure. While

the Fit lasts therefore, we the Patient to be awaked; then give him things, to remove obstructions in the passages, that the phrenick Nerves; things excite and recreate the Animal Spirits, which burning volatil do above all other things, volatil saline Spirits joyned with oilly Salts, which sometimes wonders, while they render drowsy Spirits, and recall them going some whither else; volatil things maintain all the Fermentation of the Blood, create fresh Spirits. Here process:

Take of rectified Spirit of two Pounds, the purest Tartar four Ounces. Distill a Spirit by Destillation, which, when it is duly rectified, add as much aromack Oil of Cinnamon, Mace, Fennel, &c. as it will soak up. add a little Sal Ammoniac Or,

Take of rectified Spirit of tartarificate six Ounces, Mace, Amber each three Let them stand mixt for till the Spirits have soaked the Oyls. Then add of Sal Ammoniac two Destil them in a long in Sand and keep use. This may serve receipt;

Take of Cinnamon Water Ounce and an half, plectica one Ounce, Ster oleosus half a Drachm of Cinnamon half Mix them. Take a time. Or,

Take of Conserve of Peony Flowers, Rosemary Flowers each one Drachm, Volatil Salt of Harts-horn six Grains, Magistery of Amber three Grains. Mix them. Make a Bolus. Take it Morning and Evening.

cannot give those things; then we may give the following Purge.

Take of Mass. pil. aloephang. half a Drachm, Magistery of Amber three Grains, Oyl of Rosemary Flowers two Grains. Mix them. Make them into fifteen Pills.

After these let the Patient take the following mixture.

Take of *spiritus salis Ammoniaci succinatus*, Spirit of Harts-horn each half a Drachm, *spiritus oleosus noster* one Scruple, Water of Sage, Rosemary each one Ounce. Mix them for three Doses.

An Emulsion may be made of Seeds of Peony and *Nigella* for the time of sleep; to which prepared Emerald one Drachm may be added.

If the Disease come through some fault in the Stomach, or error in Diet, I prescribe this following Stomach Powder of *Guldencke*.

Take of Seeds of Coriander prepared six Drachms, Peony one Drachm and an half, Cinnamon, Mace, Cloves each one Scruple, red Coral prepared one Drachm, distilled Oyl of Caraway eleven Grains, of Nutmeg seven Grains, *rotula manus Christi perlata* two Ounces and an half. Mix them. Make a Powder. Or,

Take of *pulvis stomachalis bezoardicus* three Drachms, Coriander prepared one Drachm, *fecula pao-mia* half a drachm, Emerald prepared one Scruple. Mix them.

Towards Evening let the Patient take a little Wine, or *aqua vitæ Mat-thioli*,

thioli, or Spirit of Wine. Mineral and Bath Waters, drunk according to the Rules of Physick, have often cured People. Nor should we neglect Errhines, Apophlegmatisms, Frictions, Scarifications, Leeches, &c. I use, Morning and Evening going to bed, to give, and that with good success, *Sennertus* his Electuary called *pleres archonticum*, with *confectio alkermes* and Amber.

Outward Applications, such as the fat of a Wolf or Frogs anointed on the Breast, are of no small use; also other Oily, Aromatick and Spirituous things are effectual, outwardly applied. It was revealed to us as a Secret, That a Swallow's head worn about ones Neck, keeps off this Disease. A spirituous Plaster

applied to the Navil will be proper in this case, as also Oyls of Lavander, Caraway, or a bag of common Salt, Wheat and Chamomil Flowers be applied. The Belly may be anointed with Oyl of Nigella, or with the following niment.

Take of *unguentum alabastrinum* Ounces, Treacle five Scruples, Salt sixteen Grains, the rest from half a Scruple, Oyl of Rosemary, Balsam of Peru each Grains. Mix them.

For the rich you may add Amber. For Women, of sweet scented things, you may take half a Scruple of Oyl of Stor.

CH

C H A P. XIV.

Of Catarrhs.

§. I.

Division.

At length we are happily arrived at our Port, that is, the Disease of the Head, namely a Catarrh. By a Catarrh the Ancients understood a Destillation and Effluxion of Humors from the Head and Brain into the lower Parts of the Body. For Galen's ridiculous Opinion is, That the Head as it were a roof placed over a House, that receives the Vapors and all the fuliginous Excrements, which are gradually carried down the Parts below, where they lie, like Clouds in the Air, condensed by the coldness of the Brain, at length being dissolved by the heat of the Spirits, shewre down rain on the Parts below. Wherefore the Greeks call this Disease *κατάρρhis*, that is, a *Destillation* or *Stillation*. It is defined to be, *Evasation of the Lympha or vitious Serum, in any Part of the Body, but especially in the Head, which by remaining there grows sower, coagulates and causes Pain, either with or without Swelling.*

IT is commonly held, That there are four sorts of Catarrhs. 1. When the Excrements of the Brain run into the Mouth and other Parts, it is called by the general name, and by way of excellence, a *Catarrh*, 2. When sharp, serous Matter runs to the Nose, it is called *ῥίνας*, *gravedo*, or *running at the Nose*. 3. If it fall upon the Throat and *aspera arteria*, it is called *βρόγχος*, *raucedo*, or *hoarseness*. 4. But if the evasated *lympha* fall on the Breast, then it is called *rheuma*, or a *rheum*, according to these Verses :

Si fluat ad pectus, dicatur rheuma catarrhus,

Ad fauces, branchos, ad nares esto coryza.

If a vitious, polluted *Serum* fall into the Eyes, it causes an *Ophthalmia*; if into the Ears, ringing and thicknes of hearing; if into the Jaws, the Tooth-ach; if it fall into the Neck Shoulders, Arms, or other Parts, it causes Pains, and sometimes Swelling in them; if upon the Origination of the Nerves,

Trembling and the Apoplexy; if upon the Lungs, an *asthma*. Peripneumony, Cough and Consumption; if upon the Stomach, a Corruption of the Ferment; Crudity, Nauseousness, and Loss of Appetite. And it is able to raise a thousand other Diseases. We speak all these things according to vulgar Acceptation; but if we would be exact, in propriety of speaking, the evacuated *Serum* comes not always from the Head; but as it is diffused through all Parts of the Body, it may break out of any Part, as out of its place of residence.

§. 2. Part affected.

BY the unanimous consent of all Physicians, the Part affected is the Brain, called the fountain of Phlegm by venerable Antiquity, and consequently of Catarrhs. They prove, That the Brain is the Seat of this Disease, from hence, for that there is an Head-ach and Verrigo, the *os cribriforme* is stop'd, and Men's sleep is disturbed with troublesome Dreams. And more particularly they blame the Ventricles of the Brain, as some of the Moderns accuse the *glandula pinealis*, other the *pituitaria*. Some of these take the Glands discovered by *Malpighius*, *Wharton*, and others, for the Part affected; a few of them take the Glands of the *plexus choroides* which prepare the vitious, acido-saline Humor, for the Part affected. We in this case believe, that not only the Brain, but chiefly all Parts that abound with Glands and lymphatick Vessels, both in the Brain and all over the Body, are over-flowed; and inasmuch as they are too full of *serum*, we take them for the Part affected, which when through any

Cause they are burst or distended the Brain and all other Parts are float, and the Pores are obstructed. Concerning this see *Helmstedt* *lib. Catarrh.* and the noble *W. Schmidius*, our sworn friend, in *Disputatio Astrol. Med.* who discourses rationally and ingeniously. For we see all day long, how in a *coryza* the *lymph*a is voided out of the tubulated insertions of the nasal millary Processes by the *os cribriforme* through a pretty broad passage either side, beginning a little above the *infundibulum*, ending in the tubulated Corpuscles of the said processes, and tending to the Bodies of the Nose.

§. 3. Diagnostick.

A Catarrh (that we may add to the Diagnostick) betrays itself by abundant Sneezing, heaviness of the Head, Deadness and dullness of the Senses, and sometimes by the Head-ach and Spitting more than usual. In a *coryza* either a thick or a thin, sometimes a thick *phlegm* runs at the Nose like Wax; in a *branchus* there is hoarseness of Voice, roughness in the Throat, oftentimes a Cough. When *lymph*a therefore is superabundant in its Vessels, then it is voided partly by the Nose, as was said partly by the Palate, sometimes (seldom) by the Ears, sometimes also by the Eyes. Oftentimes likewise a domestick *serum* oozes out of the Lungs, in which there is a Cough or an *Asthma*. And since it is in the whole Body of Man is voided out lymphatick Vessels, so that no Part can be free from the action of this limpid Water.

While these Lymphatick Vessels are
 vermuch distended, the Water
 ther grows thick or sharp, and dis-
 charges it self on this or the other
 part; or by little and little it makes
 way by its Acrimony and Salt-
 ss to the external Parts of the
 body under it. Then this aculea-
 d *lymph* makes breaches, hence
 Pain and Swelling arise either in
 the Side, Loins, Arms, Shoulders,
 es, Teeth, Kidneys, Hips, Legs
 several Joints, that is, by reason
 Solution of Continuity in those
 parts. From the concomitant Hu-
 or also a Catarrh is called, either
 or cold: for when a thick, or
 cid Humor, having little or no
 Salt, is precipitated, we say it
 a cold Catarrh, in which only a
 ill Pain is felt; but if a Salt be
 xt with it, which by its rigidness
 d sharpness, as it clings to the
 rous *mæanders* of the Tubes, pro-
 ces a rending or pricking Pain,
 e call it a hot Catarrh. For un-
 s the pointed Particles of one Bo-
 did not agree with the Pores of
 other, but aimed always at the
 ne end, no such Pain could arise.
 or the Figurists (or mechanical
 ilosophers) do well explain the
 iformity of Motion by the *simile*
 Teeth and serrated Points in
 ocks; for instance, as the Teeth
 one wheel do exactly fill the in-
 rtice of the Teeth in another
 wheel, that is, as the Points of one
 dy correspond to the Pores of
 other; so these things seriously
 nsidered, as certain a knowledge
 our natural Actions is derived
 om these Schematisms, the true
 mbles of Actions, as we can cer-
 nly know by the hand of a Dial,
 next to the Wheels, what hour
 the day it is; not because the
 Wheels are of Gold or Steel, that

is (if it be applied to the Particles
 of Bodies) these vitious Particles do
 not act, because they are salt, a-
 cid, &c. much less because they
 are hot or cold; but because they
 are this or that way figured, in
 such or such order, of such a
 quantity, &c. For the stress of
 the business lies in this. We may
 therefore in a safe sense call a Ca-
 tarrh hot, inasmuch as the Blood
 or *serum* are sharp, or are made so
 by the Air, or inasmuch as the rest
 of the balsamick Particles are sharp,
 acuminated rigid & like to pointed
 Pyramids. Whence it cannot o-
 therwise be but these Particles, be-
 ing so figured, must cause a Soluti-
 on of Continuity and Pain. One
 may therefore know a hot, (that is,
 a sharp) Catarrh by a sense of heat,
 itching of the Parts, frequent
 sneezing, sharp, bitter or salt taste,
 redness of Eyes and Face, &c. And
 one may know a cold (that is,
 a styptick) by the thickness and
 clamminess or heaviness of the *lym-*
pha, and by a sense of coldness.
 These are the chief Signs of the vi-
 tious predominant Humor, which
 are comprehended in these follow-
 ing Verses of *Franc. du Porta lib. 2.*
de sig. morborum.

— *Quum pituita movet malesana ca-*
tarrhum,

Frigus inest capiti, facies fit pallida,
murmur

Vox ciet, & sapor est, urinaque crudior
exit,

Mens stupet & sensus, motus torpore
tenetur.

The evasation of a vitious *serum*
 upon a Part may presently be known
 by a prudent Physician; because
 the Part immediately shows it by
 Pain and Inflammation, sometimes

by swelling, and there is a Fever. For a Catarrh seldom afflicts a Man, when there is no Fever with it, which consists in a disturbed mixture of the Blood, or in its excessive thicknes, caused by an over salt serum: for a foreign Salt communicated to the Blood, makes a different Motion, and thereby easily disturbs the mixture, and causes a Fever.

§. 4. Cause.

THIS was the Diagnoslick, now we will walk our into the pleasant field of Causes. The Ancients explain the proximate cause of this Disease, by a destillation or deluxion of Humors from the Head to the Parts below, by way of *simile*, that is, of Vapors elevated from the lower Parts to the Head, and there condensed into Water and dissolved; for instance, If you consider the destillation of Water, or boiling of it in a Pot, Vapors are elevated to the Cover, and there condensed into drops; even so in Man they call the Stomach the Pot, and the Head its Cover. If therefore the Stomach be heated by the Liver, after their way of arguing, Vapors must be sent to the Head. They say also, That a cold and moist intemperature of Brain promotes it much: for the Brain, so disposed, is not able rightly to digest the aliment, which is sent to it, and so many superfluities, and a great flock of excrements are gathered; these Humors and Vapors being condensed, at length are thrust to the Parts below, where they cause sometimes a Swelling, sometimes Pain. Wherefore the Season of the year, an improper way of living, surfeiting, excessive repletion,

immoderate sleep, sudden cold of the Head after sweating in a Hot-house, heat of the Moon-beams falling upon the South and North Winds, an unseasonable Warching, night Studies, are remote Causes.

§. 5.

THE Paracelsists prove the Disease is saline and tartareous. A tartareous Spirit, ascending to them, ascends in a liquid steam, which at length little coagulated in the Brain there are coagulating, minerals in the Brain, which Paracelsus *tract. 2. lib. 2. de morb. metal. 1. de fum. metall.* says are out of the Air by the Nostrils, That as by the heat of the Sun and Stars, and subterranean fires, many Vapors are raised in the middle region of the Air, with the virtue of cold, or (as others have it) by a saline virtue, are condensed into clouds, and being dissolved into Water, fall down both by their weight and natural inclination to Water and earth: So in the microcosm is the same rise of Meteors, Snow, Hail, and a perpetual Collection of the lower and upper, and a mutual communication of fruits. And here they agree with the Ancients, they believe Vapors arise from the lower Parts to the Brain; there condensed, as in the alembick; by which substance either a salt or sharp Humor is upon the Parts below.

And since all sorts of Salts are rained in Tartar, that is, Alum, Vitriol, Gemm, Ammoniac, Potre, Alkali, of Vinegar, &c.

various differences of Catarrhs, and therefore of Diseases, and therefore of Operations arise from thence. According to them Tinctures of Mineral Spirits are mixt with Salts, from whence come diverse defluxions with excessive heat and redness. In another place *Alfius de modo pharmac. lib. 2.* says, That a Catarrh, Rheum, *Chonchus* are excremental sicknesses of mucous dung.

§. 6.

Industrious *Helmont* holds, that Catarrhs come, when a thin Air, Scent, Ferment, or an Acid Seed is received into the Brain upon Motion; then the taintful Spirit is excluded by the *Chonchus* from the communion of the Blood, and is sent to Parts further off. The *Blas* also of the Brain inspires the Operations of the Catarrhs upon us, showing themselves most upon a weak Brain and the Membranes. Hence come the prefaces of alterations of the Brain aforehand. This is called Catarrh, or torture, under which is comprehended whatever goes by the name of Defluxions and Catarrhs. He will therefore have Catarrh to arise, not from one foundation, to wit, Man's head (as the Schools imagine all Catarrhs do fall) but from the Idiotism or proper Indisposition of the Brain, caused by topical Ferment. He rejects likewise the arguments of the Vaporists, and demonstrates to the Eye in *tract. de Catarrhi delirium*, that it is impossible that these Vapors should rise from the Stomach to the Head. See *lib. 8* of the foresaid Treatise. He will he have the *mucus* arise

from the famed Orifice of the Stomach, but that it is an useless excrement bred by an erring guardian. He confesses, That in the Gout there is a salt excrementitious Liquor, yet so, as that *Vulcan* is the source, cement and fuel of it; and not an ascent of Vapors from the Stomach to the Brain, nor several Humors, nor a fictitious Distillation of Phlegm mixt with bile. Whatever therefore the Schools talk of Vapors arising from the Stomach for the matter of the Catarrh, he thinks it is but old Wives Tales. All that comes from the head is *mucus* and mere excrement, but not carried out of the Stomach thither. This *mucus* when the guardian of the Brain is in good order, is white, thick, and viscid; but when its Powers are disaffected, the *mucus* is watry, sharp, salt, harsh, yellow, clammy, &c. and runs the nearest way out of his Basin or Tunnel. For in a *coryza* the Water that runs out at first, is not mere *mucus*, but a salt Water, whereby nature endeavours to wash away, whatever rests upon the spongy bone of the Brain, as a foreign Enemy. As I said, whatever it is that falls down upon the Throat from the Brain, not one drop of it enters the Lungs, but if it should, would endanger strangling. For if but one drop of Water, as one is swallowing fall upon the *larynx* unawares, and so almost choak the drinker, what would not such a quantity of *mucus* do, which in a short space of time now and then would fill Basins? This noble Author admits indeed of catarrhal Diseases; but he denies the causes, means, ways and end of a Catarrh, as the Schools have explained them. So he will have a Consumption not to be a Defluxion

on upon the Lungs, but to arise from some inward fault of the Lungs themselves.

§. 7.

Aulus thinks, That in this Disease the *serum* separates from the Blood, and an inundation comes upon the Parts, because a sharp and thin *serum* opens the mouths of the lymphatick Vessels and Glands, upon the *trachea*, or other Muscles or Parts; so that too many serosities are discharged on those Parts, whence he holds, That divers troublesome pains, inflammations, and sharpness of Humors may arise; adding, That afterwards, the *serum* thickning by Coction, sticks to the sides of the *trachea*, and straitens the passages of inspiration. He thinks also, That this ichorous Matter runs out of the lymphæducts or blood Vessels into the Vesicles of the Lungs, and causes shortness of breath, and sometimes a Consumption.

§. 8.

Sylvius thinks the proximate cause of this Disease, to be an excessive abundance of watry, serous Humor, offending in acrimony, saltness and acidity, falling often from the Head upon the Breast, causing divers Catarrhs, and sometimes a Consumption.

§. 9.

The Cartesians supposing that a subtil or æthereal matter, according to the different access and recess of the Sun to and from us, causes various Alterations and Symptoms, do admit of Destillations, ei-

ther upon the Throat, the *terea*, Palat or Breast, but explain the manner and way of stillation differently from the Ancients. They therefore hold, That the salt and sharp Matter of the Blood falling upon the Parts of the Body, holding the Matter of the Catarrh is not derived from the Brain, but is immediately carried out of the Blood by the Arteries to those Parts: saying, That by a catarrh, the serous and pituitous Matter contained in the blood, the Parts of the Arteries are day by day enlarged and dilated, out of which the Blood is poured into the Parts. Our Blood consists of many admirable Figures and Manners, which according to their Nature, Figures and Situation, are joined one among another, and are divided into divers Pores, and admit of Matter in greater or less quantity, according to the Nature of the Pores. And they add, To prove, That the Blood is not the Cause of Catarrhs, by the continued slow Fever, which usually accompanies them. For they hold, That the mixture of the Blood is not disturbed, That several Humors are poured into the Parts, and there offend by their thickness, or acrimony, or by some other ways, and in the Membranes. And they explain this by frequent sneezing, a troublesome Cough and Hoarseness.

§. 10.

Thus far, what others hold to be the cause: this is our Opinion, That abundance of *serum* abounding in the

from which evasation of a salt or acid *serum* upon membranes and Parts, we derive Pains and Inflammations. For I put it beyond all doubt, That catarrhal Diseases primarily proceed from some fault in the *Lympha*.

every day see how in cold weather the *lymph*a is encreased, that is, as the Pores of the skin are stop'd, and so transpiration is hindred, which must of necessity encrease the *serum*. And thus, That Catarrhs and Rheumata are produced by a sudden stop of transpiration, as experience evince. But if the *serum* be any fixt Salt, either condensed by the Air, or bred in the blood and *serum*, a pricking Pain and the obstruction is encreased, because that stubborn Salt congeals in membranous Parts. And if there be an evasation of *serum* and consequent stagnation about the head, then there arises Difficulty of breathing, a Fever, Heaviness of the head, and present Suffocation, which are companions of this Disease. I am easily perswaded, that Catarrhs never come from the Head, but that there may be a serous effusion in all Parts: For there are several ways, that is, lymphatick Vessels, which are diffused all over the Body, and why are these stop'd only in the Head, and not in the Lungs, Neck, Liver, Muscles, &c. For what use are the Glands, that usually prepare the *serum* for several other Parts? Yea, if we discovered by a microscope, that the whole Skin is glandulous, why should we, who have always our Heads moist with Phlegm, be full of coagulated *serum*, yet seldom troubled with Catarrhs? Why do we not say, That

a Dropsie comes from the Head? We doubt not therefore any longer, but that catarrhal Diseases do arise primarily, from some fault in the *lymph*a through all Parts. For if the *lymph*a be evasated out of its Glands and Ducts, it over-spreads the Throat and *aspera arteria*, and by its excessive Acrimony and Acidity excoriates the foresaid Parts, whence Pains, Inflammations and Hoarseness arise, with which they that are taken, complain of a fiery, burning Pain in their Throat. And whereas we said before, that the *lymph*a is encreased by a cold Air, we see it plainly in a *coryza*, which is common almost to all Men; for a cold Air always precedes, which as it passes, hinders insensible transpiration, whereupon the *serum* is made more sharp and acid, and is bred more plentifully in the foresaid places. This *lymph*a, where it finds a passage endeavours to get out all at once, especially if these Vessels be over-filled and distended with drink, as they are usually in great drinkers. If this lymphatick evasation come in the Throat, hoarseness arises, which I have observed to last a year and longer, and sometimes to go away without a Consumption. If an evasation of *serum* be made in the Stomach, then the Ferment of the Stomach is spoiled, all the food a Man takes corrupts, then a tough and thick *lymph*a, unfit to digest meat, hinders and spoils fermentation. And frequently, while these lymphatick Vessels are loaden with too much *serum*, it disburdens it self into other places, turns slowre for several days, and by little and little makes its way by its thinness and acrimony into the external Parts of the Body under it, whence divers Ache

ches and Pains flow. For there is no part of the Body, but has its lymphæducts, so that the Lungs are not without them; and therefore no Part is free from evafation of *serum*. The ways, by which the catarrhal Humor flows, are principally the lymphatick Vessels, and less principally the sanguiferous Vessels. Here, by the way, we would have it observed, That we do not derive a suffocative Catarrh from *serum*, only evafated in the Lungs, much less, as the Schoels would have it, from the Brains showing down upon the Throat, as *Helmont, tract. de Catarrh delirament.* but we rather think it comes from the blood's gushing out, of the ascending and descending Branch of the *vena cava* into the heart, and thence into the Lungs, and its being hindred a little in its Motion; then it begins to stagnate, through an excessive Acid, either bred in the Humors, or brought thither from the lower Parts, especially from an Acid and Austere pancreatick Juice, mixt both with the Blood and *serum*; whence proceeds danger of choking and difficulty of breathing. which is of necessity attended with froth, after a frequent but vain reciprocation of the Air; as I learned by experience in a Dog, into which, after a drachm of Spirit of Sulphur *per campanam*, diluted with a sufficient quantity of Water, had been infused at the crural Vein, froth appeared after the coagulation of the Blood. From whence it follows. That, if an Acid coagulate the Blood, a suffocative Catarrh must arise in the Lungs, and it is a pulmonary Apoplexy. For we judge, That as an Apoplexy is caused by the hindrance and abolition of the Blood's Motion in the

Brain, so a suffocative Catarrh proceeds from the same Motion stoppt a little in the Lungs, *cordia*, which Motion of the Blood is hindred by the abundance of Blood, or by its thickened acidity, or by obstruction of the Vessels, or by a coagulation, and thence flow Anxiety, oppression of Heart, Shortness of Breath, and sometimes Sudden Death, and at length sudden Death, which things appeared in the opening of one that died of this seafe, who for a year and a half was troubled sometimes with a suffocative Catarrh, sometimes with Apoplexy; but at last he died of a suffocative Catarrh. When he opened his Corps, we found the *domen* and the Breast above the *sternum* so beset with fat, that it was four inches thick. The Blood to be found any where about the Heart and Lungs, stagnated there; because the vessels of the Blood were obstructed. In this pious Man, who would have you observe the way, That when he was short of breath, he found relief by coughing and thumping his Breast, the reason whereof is this, That the motion of the Blood was restored in this Commotion. And *see in Miscell. curios. an. 1671.* shews, That there are very glutinous, callous Bodies, the dye of a suffocative Catarrh in the Brain or Heart, and in the Lungs, and in the stomach in both. Undoubtedly this Disease both the Lungs and the Heart pass to the Lungs, and the Lungs are obstructed, whence such a Disease arises, and stagnation of Blood; in the Lungs of Catarrhs it is certain

the *serum* is evacuated, and such follow. These things prevented, one may easily give a reason for Quinsies, Hoarseness, Running at Nose, Tooth-ach, and other catarrhal Diseases.

§. II. Prognostick.

This was the explication of the cause, now we will subjoin the prognostick, in which a Physician need to be curious. If the Catarrh for which we now call *serum* or *phlegm*, descend from the Head upon the Nostrils, the sink of the Brain, the Disease is slight, and over in a few days. If it be evacuated in the face, it is worse; and if upon the chest, it is worst of all; for from the chest oftentimes an exulceration follows, whence comes a Consumption of the Body. All mild and Catarrhs, if they be neglected, are dangerous. Those that are subjoined to a Catarrh, are not altogether safe from danger; because they are obnoxious to several other Diseases: for abundance of *serum* threatens an Apoplexy, Palsie, Pleurisy, Blindness, Consumption, Tooth-Quinsie, Deafness, Stoppage in the Bladder or Kidneys, Pain and Swelling of Stomach, *Sciatica*, &c. Looseness and the Colic. A Catarrh with a continual discharge is more difficult to cure, than one without it; for in the former case more abundance of *serum* is denoted. A suffocative Catarrh always threatens imminent death, and kills a Man in a few days, just as if he were taken in an Apoplexy. The Autumnal season is most obnoxious to Catarrhs, because of frequent alterations of the Weather. A Catarrh is cal-

led great, which seizes a noble Place. Old Men are easily troubled with Desillations, as *Hippocrates aph. 31. s. 3.* testifies, therefore they are more difficultly cured in such.

§. 12. Dietetick cure.

WE have done one task, now we must go to another, namely the dietetick cure, which consists, as I have often said, in the six Non-natural things, as Physicians call them. *Air* comes in the forefront, inasmuch as it contains in it self subtil and saline Particles: for the wisest Physicians, and the illustrious *Boyle* tell us, There is a Salt in Air; these saline Particles therefore being peccant in their Motion and Figure, and insinuating themselves into the Mass of Blood and *lympha*, cause our Disease. The Air then must be hot and dry, on the contrary a windy, rainy, northern and southern Air must by all means be avoided. For every one knows what mischief excessive cold does, since thereby transpiration, which is so necessary, is hindered, the *serum* coagulated and stopt in its Motion, and the Glands of the Skin bound up. And this cold does most harm, when it comes suddenly after great heat, and when it is moist withal. They experience all these things, who live near the Sea or Fens. Let him that is subject to Catarrhs, avoid the Rays of the Sun and Moon.

Meat is next, whose efficacy is great in breeding Humors, and influencing Mens health. Some Meats especially are apt to breed Phlegm, according to *Horace lib. 2. sat. 2.*

*Dulcia se in bilem vertent, Stomachoque tumultum
Lenta feret pituita; vides, ut pallidus omnis
Cœnâ defurgat dubiâ.*

If the Meat be good and laudable, good Blood is bred thereof, which illustrates the Mind and Senses, renders the Affections sedate and quiet, and composes all the Motions of the Mind according to the dictates of reason. But when from bad Food vicious Humors and turbid Spirits, there proceeds a fuliginous Vapor (according to the Ancients) fuming up into the Brain, the Mind contracts much harm, the Senses grow stupid, and many serosities are gathered. The Meat therefore in this Disease must be easy of Concoction, dry, and such as breeds good juice; for instance, potched Eggs, Hen, Capon, Chicken, Partridge, Veal, roasted rather than boyled. It must also be moderate in quantity, the Supper must be more sparing than Dinner; and after Supper some sweet Meats of Quinces will be proper. On the contrary, forbear all Meats that are gross, viscid, difficult of Concoction, cold and moist, such as Onions, Garlick and Cheese, inasmuch as these, and such as these, encrease the stock of Humors. As for *drink*, it must be moderate, for it is of great Moment in making Blood and Spirits, which, if it be thin, pure and defecate, breeds Blood and Spirits like it self; but if it be thick and crude, it leaves Tokens of its nature in the Body, as drunkards daily testify. Drinking of Well-Water is destructive to Man and Beast, and must be avoided, because it breeds abundance of bad *serum*.

Sleep must in this case be moderate, not on the day, nor at Night. The Head must be covered, lest it be hurt by external cold, which is the Enemy to the head, and nervous Parts.

Motion must neither be excessive nor in defect, in this case especially slothful idleness must be avoided, which fills the Blood Vessels with abundance of bad Humors.

The Belly and Bladder must be free.

As to the *Passions* of the Mind, Men must give themselves to no violent and pleasant Speculations and meditations. Fear, sadness, and despair, inasmuch as they hinder the Motion of the Blood, must be avoided, and so gather serosities, which must be voided. Cold Baths must be avoided, for they hinder transpiration, and fill the Body with bad *serum*. Let us leave to Physicians the most accurate observations of the Ducts, by which transpiration is made, are far larger in us Men; so that what hinders in us Men, does not hinder in them, it does not hinder in us. *Cyrus* was much unseasonable, and endangered *Alexander* the Great. For when he had come to the reeking hot Body of the Great King, his Limbs became cold, he pale, and the vital Spirit almost forsook him.

§. 13. Pharmacopœia Cure.

Hitherto we have been missing, now we are in close fight, that is, to the cures. And first, of *serum*.

with the Ancients. And they give a Clyster to such as are troubled with a Catarrh, then they leave the Humors obedient to Nature.

When they have done this, they endeavour to force the peccant Humors out of the Body, by Evacuates and Evacuators. And they give an Electuary or Juice of Roses, *diaphenicum*, *pilule aureæ*, *china*, *corbia*, *de agarico*, &c. *trochiscatus*, *cassia*, *rhubarb*, *body*, *electuarius Indum & diacodon*. If strength permit, or if there be any impending danger of a violent Fever or Suffocation, they immediately order Bleeding in the Neck.

They will have violent Purges, lest they might irritate the burthenfom Matter to flux. At length they try to derive the Catarrh with head-Purgers, Emetics, Apophlegmatifms, Sternutatories, actual and potential Cauteles, applied to the fore-part of the Head, and for the same end use Blisters. Then they order things to stop the flux of Humors, especially if at the first there be danger of Suffocation from the presence of the Catarrh. Things proper to a Catarrh, are these following.

diacodium simplex & compositum, *spec. diapapaveris*, *diatrachina frigidum & calidum* (to stop the Catarrh be cold or hot, they earnestly contend, That they must be cured with contraries). *pilule de cynoglossa*, *loboch de papavere*, Bole Armenick, Juice of Liquorish, Violets, dried Roses, Seed of white Juniper, and Gum Juniper. They use a Spike kept in the Mouth at Night-time; they make a decoction of *nigella*, and other aromatic things. They shave the

Head, and apply Oyntment of Roses, and a Plaster of *terra Lemnia*, Roses, Plantain and Bole Armenick. They add such Medicines as may strengthen the Brain, and consume the remainders; these are, *diamoschu dulce*, *diambra*, *species aromaticæ rosatæ*, *Michridate*, *Conserve of Sage*, *Rosemary*, *Betony*, *Cypress roots*, *stæchas*, *gallia moschata*, *lignæ*, *ladanum* &c. For this end they use to make a Pomander of Cloves, *gallia moschata*, *Nutmeg*, *styrax*, *Calamint*, *Cubebs*, *Cinnamon*, &c. They make a Cap of leaves of Bay, wild Marjoram, Seeds of *nigella*, *stæchas Arabica*, *Frankincense*, *Mastic*, *Cinnamon*, *Mace*, *Nutmeg*, *Cloves* and red Roses. They order bags also of Salt, Millet seed, Bran, and other things, to be applied to the Head. They rub the Head with a rough hot Cloth. Then they extol this following Plaster, applied to the coronal Suture;

Take of Seed of *nigella* roasted one Ounce, Mustard roasted, *Frankincense* each five Drachms, *Mastic* three Drachms, *Pigeons dung*, *Barley Flower* each one Ounce. With *Oxymel* of Squills make a Plaster according to Art.

I pass by the rest on purpose.

§. 14.

NOW we will hear what the Paracelsists say. And they, to dissolve coagulated Tartar, to coagulate the dissolved, and to reduce them both, use the things following, especially to purge fluxions of the Head, such as *Glew*, *Elder*, *Stavesacre*, *Saffron*, *Hermadaills*, *Pellitory of Spain*, *Euphorbium* and sal Gemm.

Gemm. *Paracelsus* also, for Melancholy Defluxions, and a hardened Blood, commends Polypody, Hellebore, Spurge, Agarick, which he advises must be carefully prepared and corrected. Moreover, in their Opinion, things that dry up Catarrhs, are Essence of Baum, Moonwort, Clary, lesser Bugloss with the red Flower, which even worn in ones Hat, is said to be moistened with the Humors, that it attracts out of the Head. Some for purging, highly extol *tartarum vitriolatum* and *elixir proprietatis*; and for strengthening, Oyl of Amber, which for stopping a Catarrh is reckoned by them very efficacious; also if Powder of Amber be put in a Bag, and heated in Spirit of Malmsey Wine, and besprinkled with a few drops of Oyl of Amber, and applied to the Crown of the Head, it is a thing of great efficacy; or if the Nose and Temples be anointed with Oyl or Balsam of Amber. Some, to stop a Catarrh, fly to Narcoticks and *Laudanum*. They say, that three drops of Oyl of Vitriol given in Mint Water, and repeated several times, do by a specificke and singular Virtue waste and dissipate Catarrhs. Spirit of Vitriol, of Tartar, Oyl of Sulphur, Turpentine and *terra sigillata* are said to perform the said effect; Water of Mother of Thyme drawn chymically with Spirit of Wine, is with them a principal Remedy; Oyl of Marjoram, Rosemary, Anise, Fenil, *oleum Lunæ*, Liquors of Sapphire, Emerald, Moss, are cried up by them for their secret Virtue in this Disease.

§. 15.

Helmont cures Catarrhs divers soporiferous there shall be occasion; foreign acidity with some come into the Stomach, not, but Vomits will carry He contemns not treating this Disease, but orders of Sow-bread be cut into and anointed with Oyl of Almonds, and put into the *Grembs* also, *Helmont's* recipe, makes an effectual Stry of *marum* in this case. must be dried, so as it may its greenness, under a leaden and a green amicable Paste be made of it.

§. 16.

Ullis, that the other recrements Blood, which often causes a sease, may some way be removed, advises the use of Diureticks and gentle Purgatives, in this admonition That Remedies are interposed, letting be not neglected, ly in a suffocative Catarrh, ter it, he uses often to a gentle Purge, that is, Peach-flowers, or of *Ribes* or *pilula succini, cochia*. Diureticks and Sudorifics mends Wood-lice, Voles, Amber, Soot, &c. and testaceous Powders Pills with Turpentine will have the Mouths of and Glands, which grow moderately bound, that not void their Serpents on the external Parts.

ould have those Parts smoothed, they may not be hurt by the action of a sharp serum, or by sitting with the external Cold. The first case Conserve of red roses, *olibanum*, Mastich, *loboch de*, Syrup of Jujubes and of dried roses are good: in the latter, he says that Syrup of Liquorice, Marsh-mallows, and other pectoral things is good. He commends chirurgical Remedies, namely Blisters, Cauteries, Frictions, Issues, Leeches and other things, where shall be occasion.

§. 17.

Hippocrates his Opinion, if a Catarrh fall upon a noble Part, it must be averted and allayed by all means; therefore salt and subacid humors must first be corrected, and then carried off with Hydragogues. In correcting the Acrimony of the blood and Humors, he magnifies diuretic and sudorific Medicines, such as Decoctions of Roots of *Chilifera*, Burdock, *cantrayer*, Wood of *Guajacum*, *sassafras*, Box, Juniper, &c. For amending the Humors he commends *pilule cynoglossa* & *de styrace*, about five grains, Gum tragacanth, Mastich, *gum*, *styrax*, roots of Liquorice, greater cold Seeds, Quince, Almonds, Barly, *Opium*, Litch Juice inspissated, all fat things, Bole Armenick, *terra Lemnigillata*, Coral, Pearl, Ashes of *box*, &c. He will have it, that, to diminish the Humors, Issues may be made with good success. Errors also evacuate the peccant Humors by the Nose, and likewise avert it from the Throat.

§. 18.

According to the Cartesian hypothesis the indications are taken from the Blood or serum, that is sometimes too thick and viscid, sometimes too thin and sharp. In the beginning therefore gentle Purgers are proper, namely, *pilule de succino*, and other Aloeticks. Vesicatories also, Issues and Scarifications to discharge the Serosities, satisfy these Indications. If a too sharp Matter irritate the membranaceous Fibres too much, Opiates may very well be used, such as *pilule de cynoglossa*, and other things already mentioned, which we shall here forbear to repeat. Besides, oily and fat things are proper, inasmuch as by their softness they involve the Points of a heterogeneous Salt in the Blood; and earthy and gross things, such as Crabs-eyes, *terra sigillata*, Bole, inasmuch as these, and such things as these, do file and turn the pointed Angles of Salts. Gums and glutinous things are proper, which by their gross Particles guard the Habit of the Body against the Acrimony of the Salt. They say, that a Decoction of the Woods is good, inasmuch as it corrects and mends the viscid and sharp Particles of the Blood.

§. 19.

WE proceed thus; We immediately incise the viscid Phlegm, which abounds, and evacuate it. But here observe, that you first of all correct the Acrimony or Acidity of the Blood and lymph. To evacuate it, Hydragogues and Aloeticks are proper, such as *pilule Francofurtenses*, which

which many call catarrhal Pills. Also a cephalick extract prepared in the manner following.

Take of *Coloquintida* fix Drachms, Trochiscs of Agarick, *diagrydium rosatum*, black Hellebore prepared, *Turbith* each half an Ounce, Aloes one Ounce, *species diarrhodon Abbatis* half an Ounce. Put them in a glass Vessel with Spirit of Wine, that it may be eight Inches above. Digest them for ten days in a hot place, afterwards add *species diarrhodon*, and infuse them yet four days longer. Strain them out well, and let the strained Liquor be distilled in *balneo Mariae*, till it exhale to a just consistency. The Dose of this Extract is half a Scruple.

Here is a Form for young Beginners.

Take of *extractum cephalicum* eight Grains, Resin of Jalap fix Grains, volatil Salt of Amber, Gum *galbanum*, Ammoniack each three Grains, Oyl of Myrrh one drop. Mix them. Make Pills.

Or according to the Galenical way;

In a Decoction of the Woods infuse of Leaves of Senna three Drachms, Aniseed half a Drachm, to the Colature add of Syrup of Roses solutive one Ounce. Mix them.

For an utter consuming of the catarrhous matter, *Hartman* persuades the use of *pilula de succino Cratonis* every Week in Syrup of Betony, to about half a Drachm, and to take it three hours after Supper for three Months, and I do

not discommend the use of it. To correct the Acrimony, or Saltiness of the *serum*, and to cast every ferment out of the Blood, and to reduce *crasis*, these things are *liquor cornu cervi succinum* seven drops of it in some potent Liquor, *spiritus salis anisatus*, that is, if the Cough, also *sal volatile* that excellent Remedy, *stru catarrhalis*. Here are Receipts for younger ans.

Take of Water of Mother three Ounces, Syrup of Marsh-mallows one Ounce and an half of Sassafras-Wood two Ounces. Mix, and give it.

Take of Essence of Sassafras half an Ounce, of *Essence of Flowers* two Drachms. Mix them. The Dose is for younger Or,

Take of *essentia nostra* Spirit of Vitriol, *spiritus salis anisatus*, each two Drachms. Mix them. Or,

Take of *guajacum* Wood three Drachms, Tincture of *guajacum* half a Drachm, *antimoniacum* one Drachm, *essentia* of *guajacum* Wood three Ounces. Mix them, and take it three times a day.

Take of Essence of Sassafras three Drachms, Spirit of Sassafras half a Drachm, Oyl of Clove, Amber, Aniseed each three drops. Mix them, and take it three drops for a Dose.

Tachenius commends Cam-
dissolved in some proper
for a specifick: Or,

of Spirit of Tartar, *Sassafras*,
Guaiacum each one Drachm, *liquor*
cervi succinatus half a
Drachm, Decoction of *Sassafras*
Wood two Ounces. Mix them.

catarrhal Water of the Woods,
no mean use. For *Brunnerus*
Counsels, calls *Sassafras*-
a most noble Medicine in
catarrhs. Here is a Form;

of Wood of *Guaiacum* three
Ounces, *Sassafras* two Ounces,
half an Ounce, yellow Saun-
d five Drachms, *Brazile* half
Ounce, Root of *Sarsaparilla*
Ounce and an half, *Elecama-*
ne five Drachms, *Liquorice*
five Drachms, Bark of *Guaja-*
ca six Drachms. When they
are cut, infuse them in Water of
Saltory, Cresses, Scurvy-Grass,
Linum each two Quarts, di-
still them fourteen hours, and
destil them. The Dose is
Ounce and an half every
morning and Evening.

As to this is the drinking of
and Spirit of wild Thyme,
and before Sun-rising, destilled
and Wine, several times coho-
red and fresh added. In this Spi-
Sassafras-Wood ought to be in-
and a catarrhal Essence is

to correct Catarrhs, and a-
the Serum and Blood, *sal vo-*
lucosum Sylvi and *nostrum*, &
Unguentum serpilli Mynsichti, are
And Spirit of Vitriol is said
a singular Medicine in drying
Catarrhs.

If by a too sharp *Lympha*, made
so by an excessive cold Air, the *Larynx*
be affected, and a dry Cough
be raised thereby, and shortness of
Breath, with Oppression, because
of the Coagulation of the Blood,
arise; some *Sperma ceti* must by all
means be given in some Broth or
Beer. Here follows a Receipt.

Take of *Sperma ceti* one Drachm,
prepared Amber, Flowers of
Benzoin each half a Drachm. Mix
them for two Doses, when one
goes to Bed. Or,

Take of prepared Amber one
Drachm and an half, *species dia-*
tragacanthi frigidi one Drachm,
Sugar dissolved in Betony-Wa-
ter what is sufficient. Make
Tablets according to Art.

Opiates also will be very proper;
such as new Treacle, *massa pilula-*
rum de cynoglossa, *de styrace*, *theriaca*
coelestis, &c.

If a Catarrh have siezed any
Place, and cause much Pain; then
the things aforesaid may be joined
with Opiates, and a Bag filled
with the things following, or with
some such like may be applied to
the pained Part. Take of the E-
mollient and Discutient Herbs as
much as you will; boyl them in
Milk, and apply them. Then we
use to conclude the Cure with purg-
ing. Diureticks also may be given
sometimes, such as Wood-Lice,
Crabs-Eyes, Salts, &c. inasmuch as
they discharge the abounding se-
rum by Urine: Hence we read in
Riverius, how Oyl of Scorpions a-
nointed on the Back-bone outward-
ly did good. Among Externals
there are divers Plasters, and a-
mong these *Emplastrum cephalicum*

ger, we fly to Cupping and
sters, as to our last refuge. Then
procure a Stool with sharp Cly-
s made of aromatics and colo-
thiarc Medicines tied in a Rag.
instance;

ce of pectoral Decoction half a
int, dissolve of *elect. hiera cum*
garico half an Ounce, *mel antho-*
rum one Ounce, Oxes Gall one
Drachm, Nitre fixt with Anti-
mony two Scruples, one Yolk of
an Egg. Make a Clyster.

At length we turn us to Dissol-
vers, or Hinderers of the Coagu-
tion of the Blood. And many e-
ven the Potion following;

ke of *Sperma ceti*, from half a
Drachm to two Drachms, dissolve
it in a sufficient quantity of Hyf-
lop Water, Syrup of Hyflop two
Drachms. Mix them.

In this case also all Volatil Sales
ever are good, such as Volatil
of Amber, Harts-horn, Soot;
Volatil Spirits, such as *spiritus*
inis juccinatus noster, which is
in manner following;

ke of Soot out of the Chimney,
and Amber each alike, as much as
you please. Destil it according to
Art. First wash the Receiver
with Spirit of Wine, and rectify
the usual way.

ope Adrian's Wine must be re-
ed as a Secret. Spirit of Sul-
r mixt with Spring Water is
amended by several: For Acids
not only coagulate dissolved
od, but also dissolve coagulated
od. I have often known Gum
amoniack, dissolved in Hyflop

Water, and given in Wine, do
good. Crabs-Eyes egregiously dis-
solve grumescient and coagulated
Blood. Here are Receipts;

Take of Essence of Myrrh one
Drachm, *spiritus fuliginis succinatus*
half a Drachm, *Elixir pectorale*
one Drachm and an half. Mix
them. Give twenty drops in the
following or some such like mix-
ture.

Take of Water of Hyflop, Fenil,
each two Ounces, *aqua asthma-*
tica Rudolphi half an Ounce, *Oxy-*
mel of Squills six Drachms. Mix
them. Or,

Take of compound Spirit of Gum
Aminoniack, *spiritus asthmaticus*
each half an Ounce. Mix them.
The Dose forty drops. Or,

Take of *lac Sulphuris* half a Drachm,
flos sulphuris myrrhatus one
Drachm, Flower of Benzoin eight
Grains, prepared Wood-Lice
half a Drachm. Mix them.

Juice of Radish mixt with Sugar
is an experienced Remedy.

Among Externals we highly va-
lue the following Plaster.

Take of *Tacamabaca*, Frankincense,
Mastich each what is sufficient.
Make a Plaster according to Art,
and spread it upon Leather.

For the Motion of the Blood and
serum (sometimes this catarrhal
Matter runs so, and is evacuated out
of the salival Glands by the lym-
pharick Vessels, upon the Throat
and the *aspera arteria*, that it often
endangers Strangling) Sudorificks
promote it, that is, *tinctura bezar-*

dica Michaelis, antimonium diaphoreticum, Spirit of Salt, urinous, volatile Spirit of Ivory, Soot, Castor. Out of the Fit I doubt not but divers Liniments and several other things before mentioned are proper here: for Instance;

Take of sowre Leven three Ounces, prepared Amber three Drachms, Vine Vinegar what is sufficient. Apply it to the Head.

For prevention we recommend

these Pills following, and the

Take of *Massa pilularum de Cratonis* one Drachm, Symplic Roses made by several times two Scruples, *scammonium* one Scruple. With Essence of Rosemary-Flowers, make like *Aloephagina*, for 3 times.

But not to be tedious, forbear any thing more in place, and betake our selves to other things.

BOOK II.

Of Diseases of the B R E A S T.

CHAP. I.

Of a Cough.

§. I.

IN the former Book we treated of Diseases of the Head; now we will proceed to those of the Breast, which contains all between the *aspera arteria* and the Diaphragm. And we shall begin with Cough, which is commonly described, to be a violent, frequent, unusual and sonorous Efflation or Expiration, wherein a great part of the Breath bursting out with violence, does the main Strength endeavour to discharge the sharp Excrements, arising from a peccant Lympha, provoking and vellicating the Trachea, and the

Fibres of the Lungs. Every Cough is of one of these three Sorts; either Moist; or Dry, which is called Convulsive; or Stomachick. In a moist Cough, some Humor got into the Passages of the *Trachea*, is by Coughing voided at the Mouth; and as to consistency, this Humor is either thick or thin, crude or concocted. In a dry Cough nothing is brought up: and this is only caused by a subtil, heterogeneous Matter, perpetually irritating the nervous Fibres of the *Trachea* and Lungs, which we may call a Spasim or Convulsion of the Lungs. So likewise we question not, but a

Cough comes by consent : For we see, if the Stomach is loaded with tough Phlegm, that a Cough arises from thence, which we may call Stomachick : I verily believe also, That a Cough may proceed from consent with other Parts.

§. 2. Part affected.

THE Part affected in a Cough, is commonly reckoned to be the Lungs, which are affected sometimes by themselves, sometimes by consent with other Parts, to wit, the Breast or Diaphragm. For the Muscles that contract the Breast, the motive Fibres of the *bronchia*, and the Nerves of the Lungs sympathize, and other Nerves in Parts remote from the Breast being irritated, by means of the Spirits raise a Cough ; nor will we excuse the *Trachea*, being a cartilaginous Pipe furnished with its Fibres.

§. 3. Diagnostick.

THE Signs of this Disease are manifest of themselves ; for the Cough is so strong and frequent, that though the Patient would willingly hold it, he is not able ; whence came the Proverb, *A Cough and Love cannot be hid*. The reason is, Because in a Cough the Breast must be very much compressed, since otherwise, that which is noxious can never be pumped up from those Parts by a Cough, and this preternatural Commotion, by reason of the site and conformation of those Parts, which serve for respiration. Oftentimes also in this case one feels a tickling in the inside of the Mouth, and a Pain in the Breast. The Humor also or *serum* or *pus*, which is voided by Coughing is vari-

ous, sometimes white, sometimes yellow or red, sometimes black, as *Reisellius*, chief Physician of the *German Ephemerides* has observed ; and sometimes the Sputum is black, as I have often seen in my own Eyes. Sometimes this Humor proceeds from the *Larynx*, sometimes from the Pipes of the Lungs, sometimes in the Vesicles of the very Lungs, and these humors or ments are sometimes left in the most Vesicles of the *Trachea*, whence they are cast out by frequent, violent and laborious coughing. Sometimes Men spit the Voice is hoarse, sometimes far lost, that it can scarce be heard. People, who have long Nerves often lean and troubled with a cough. Now we will proceed to the Cause.

§. 4. Cause.

ACcording to the Opinion of the Ancients, a moist Cough arises from an Humor, that falls upon the Head upon the *apex* of the Lungs, which if it comes in plenty and violence, there is an excessive difficulty in breathing, a great Oppression is felt in the Breast, and sometimes in the Lungs. Sometimes the Membranes are afflicted : falling upon them therefore, a Phlegm stops the Organs and impedes of respiration, and excites coughs and tickles these Parts. Sometimes a dry Cough, either from Vapors or from Matter, but it cannot be spit up. They say that all the Humor falls from the Head upon the Breast ; the Cause of such another false Opin-

Vapors can ascend from the Parts, to wit. the Spleen, Liver, Stomach, Womb, to these Parts, proceed Heat, Draught, Inflammation, and sometimes Exulceration. They also firmly believe, a dry Cough may arise from the same Vapors in an Inflammation of the Liver and in Fevers: A moist Cough, also they hold, sometimes a viscid Matter is secreted in the Lungs; and they attribute it by this; Because a Cough arises in a Pleurisy, Consumption, Inflammation of the Lungs. As well the Moderns, do not attribute it to a Pleurisy, but to a Compression of the Diaphragm, Worms, and from other sharp Causes. The Cause of Hoarseness is a great moistening of the Membranes which make up the Larynx, or Catarrh or destillation of an excrementitious Moisture, falling in the *arteria*, of which is treated sufficiently in a Ca-

§. 5.

Barcellus, that Master of great Secrets, declares this Disease excrementitious, and maintains it has its rise from Tartar, or Mucilage, whether it proceed from a frustrated separation and division in the Lungs and Passages of the Breath, or be translated in solid or vaporious form from other Parts. Now by Tartar (which is the Dung of every Part) means any excrementitious, foetid Humor, whether it be thin or thick, which of its own Nature is apt to Coagulation, and has no use in it for expulsion, but an acrid and acid or aluminous Virtue. For a Mucus sticking to the

Parts does by degrees, and insensibly dry and thicken by virtue of the Heat, and by supervention of a saline Spirit is turned into Slime, Gravel, Earth or Stone, which he reckons to be Sorts of Tartar: Or, to speak as other Men do, It is coagulated and congealed into a salt, vitreous, clayish Phlegm, or into a gritty and chalky Matter. This Tartar sticking to the Sides, stops the Passages of the Breath, by its acquired Acrimony, irritates the Membranes, and by open force infects the Lungs, because it is of a saline Nature (whose property it is, to be bred and coagulated of Water) so that the Tartar being dissolved by a dissolving, inciding and absterfive, saline Faculty, is by the Spirits, the mechanick Separatory and Expulsory of the Lungs, rejected through its proper Emunctory, the Lungs; as *Petræus in Nosolog. Harmonic.* expresses it.

§. 6.

Helmont holds, That a Cough and Hoarseness arise from a sense of some things noxious, that troubles the *Larynx* from the end of it to the bottom of the Lungs; whence the filthy Atoms of the Air, or sharp Fumes, or fierce Cold, insinuate themselves into the *Larynx*, or into the substance of the Lungs. So external Injuries get into them, and by their abortive Virtue make Excrements; thus he discourses of a moist Cough. And he thinks, that a dry Cough proceeds from scarcity of a salt Mucus; and the reason he gives, why a Cough is familiar to old Men, is, because a little Excrement resides in the extreme Branches of the *Larynx*, which does not yet stop the Pipes, but

but does by its presence disturb and diminish the local Ferment, whence continually Excrements are raised.

§. 7.

According to *Willis* his *hypothesis*, the Primary Cause of every Cough is an Irritation of the Nerves and Fibres belonging to the Lungs. Oftentimes also a sharp Humor gathered in the Brain, and falling upon the Head of the pectoral Nerves, causes a most troublesome Cough; so a *serum* flowing out of the Arteries into the upper parts of the Throat or *Larynx*, may, in his Opinion, cause a frequent and troublesome Cough, without any notable hurt to the Lungs. This noble Author says a dry Cough is Idiopathic, and is caused divers ways. An obstruction of any one of the Pipes of the Lungs, whether it be by Compression, Oppletion or Contraction, of necessity causes a Cough. Such things also, as are able perpetually to irritate the nervous Fibres, cause a dry Cough, among which he reckons Inflammations, Tumors, Stagnation of the Blood, either through Plenitude or Depauperation, chalky or stony Concretions, *Polypj*, Worms, &c. But a dry Cough is sometimes raised by the instinct of Nature, instead of a Pump, as he says, namely, that the Blood, which can scarce pass the Lungs, either through its proper Dycrasie, or because the pneumonick Vessels are not wide enough, may by the shaking of those Parts be put forward, and put into swifter Motion. As for a convulsive Cough, its conjunct Cause consists in the irritation of the Lungs: for the Motive Parts, to wit the Nerves and nervous Fi-

bres, as often as they are cause a convulsive Cough, irritating Matter, according to *Willis* is *serum* continually flowing out of the Mass of Blood, because of the too loose Frame, and motion of the Pectorals, inasmuch as the Blood stills into the Cavity of the tracheal Arteries, and the Humors may be deduced from thence. This spasmodick Disposition therefore is from a heterogeneous sticky Matter, falling out of the Ducts of the Nerves, and the nervous Liquor, upon the sensitive Fibres of the Breasts. Therefore when the Spirits relax the Fibres, are incited to Motions of Expiration, it is to convulsive Morions. Author's discourse of a Cough.

§. 8.

Sylvius thinks that *Spasmus* which is able to relax any way to irritate the *arteria* of the Lungs, may be the Cause of a Cough, and what he smears the *aspera arteria* with of Hoarseness. Sometimes something coming from without, taken by the Mouth, is carried the wrong way into the Lungs, and therefore causes a Cough, and also the Humors, that fall upon the Head (the cause of a *Spasmus*) may do; and they are either acrid, sometimes Sharp, sometimes Mild, and sometimes Thick and Chalky. It proves this by consumption, when the *Pneumonia* or *Sanguis* enters into the *aspera arteria*, the troublesome Cough is raised, and alone the Patient complains of it, he does not doubt but

gm, namely a coagulated serum
 lated out of the Substance or
 ds of the Lungs into the *aspe-*
teria, may cause a Cough. He
 owldges either the Air or cold
 s, troubling the *aspera arteria*,
 xternal causes of a dry Cough.
 of the Internal causes, with
 are a Catarrh either very Vis-
 or too thin and sharp, some-
 Exhalations and Wind, ari-
 out of the *intestinum tenue* and
 ach, and drawn with the Air
 the Lungs, or elevated from an
 efence between the Bile and
 earick Juice; namely by the
 al Veins insinuating themselves
 the Heart, and then into the Vef-
 of the Lungs, and from thence
 the *trachea*, and forcing the
 x to a Cough. He ascribes
 rfeness to a salt, briny Spirit,
 h does not so much corrode
 Parts, designed for Voice, as
 affect them in some unexpres-
 manner.

§. 9.

Artes and his followers accuse
 he pointed, sharp Particles of
 blood, which by the circula-
 of Humors are carried into the
 es, which serve for Inspirati-
 or Expiration, and residing
 in too great quantity, do velli-
 ne Parts with an unusual trou-
 and so cause this convulsive
 on. Sharp Catarrhs, and salt
 lations, falling upon the Jaws
 e *aspera arteria*, have the same

In like manner the Parti-
 of extravasated Blood being by
 nuance changed and made
 s, since they irritate the bron-
 of the Lungs, cause a Cough,
 e may see in spitting of Blood.
 efore these Particles predomi-

nate about the Jaws and Lungs, it
 cannot otherwise be, but such a pre-
 ternatural Motion, namely a Cough,
 must be raised.

§. 10.

WE shall give our own Opi-
 nion without any ambigui-
 ty. Generally therefore we think,
 That this Disease comes from some
 Fault in the *Lympha*, and not from
 a Catarrh, after the vulgar accepta-
 tion. But if any one by a Catarrh
 mean an evasation of *Serum*, and
 not a defluxion from the Head, we
 shall not contend with him; because
 he is of our Mind. *Lympha* there-
 fore is the Cause, inasmuch as be-
 ing too largely poured out of the
 neighbouring Glands, it seizes upon
 the Jaws, and especially the *aspe-*
ra arteria; by its too much Acidi-
 ty also, which it acquires by con-
 tinuance, it irritates and vellicates
 these nervous Parts, whereby such
 painful Motions of the said Parts,
 and repeated spasmodick Crispari-
 ons are caused, for which very rea-
 son a troublesom convulsive Cough
 arises. But if the serous Filth be so
 Viscid, that it quite fills up the
 Chinks and Holes of the *aspera ar-*
teria, then a Hoarseness arises. Most
 times some fault in the inspired Air
 precedes, which penetrates and
 hurts the said Parts, and hinders
 insensible transpiration a little,
 whereupon the *Lympha* grows sharp
 and sowre, and springs faster out
 of the Glands, and so causes a
 troublesom Cough and Sniveling.
 For when a Man's Body is very
 hot, the Pores of the Skin are ve-
 ry open, through which abundance
 of Matter flies away by insensible
 transpiration; when therefore such
 a Body is exposed to the cold Air,

many

many Particles of the Air insinuate themselves into the open Pores of the Skin, whereby insensible transpiration is partly hindred, the more subtil Particles flying away, grosser remain, which afterward by the perpetual flying away of the subtil Particles, grow thicker and thicker, and harder and harder; then if this thick Matter stick in the Muscles and Membranes of the Breast and Lungs, by vellicating the Nerves with its Acrimony, it causes a Cough. Nor do we here exclude any heterogeneous thing whatever, which is able either outwardly or inwardly to irritate, vellicate and contract the Fibres and Membranes of the *aspera arteria* or Lungs, whether it be Dust, Air, Smoak, Phlegm, Pus, Sanies, or extravasated Blood. Without doubt also we must reckon, the Blood does remotely contribute much to a Hoarseness. This is confirmed by a Girl, who for want of her *Menstrua* fell into a Hoarseness for half a year, and when they returned, her Hoarseness left her. Phlegm grows thick in the Lungs, because of drawing in the cold Air, and acid Particles mixt with the Air, which thicken the Phlegm.

A Cough very often arises, if phlegmatick, or salso-acid stuff float in the Stomach, which successively irritates the upper Orifice of the Stomach by its offensive and troublesome Acrimony; then the Diaphragm and the Muscles next it, designed for expiration are convulse, and so shake the Breast. Such a Cough I observed in a Woman that had a *Cancer* in her left Breast, who, because her pectoral Muscles were almost eaten away by the Acrimony of the Blood, was continually troubled with shortness of Breath

and a dry Cough, and bid farewell to this World. In the things premised, we conclude is a three-fold Cough; a moist one, a convulsive one, and a stomachick one. The moving of Motion in a Cough of the Lungs, as in the shop of respiration, as we may see in a Consumption, *ripneumony*, *Pleurisy*, or the Muscles of the Breast raised and irritated, which much compresses the Breast means the better to expel what is contained in the Passage of Breath: for the Breath is sometimes forced out so violently by its violence it sometimes lies long with it the Excrement lye in its way. Towards the end when the Patient goes to bed the Cough grows worse, because saline Particles that lay in the Breast are stirred by the heat of the Bed and driven into the Lungs, they cause a provocation

§. II. Prognosis.

Let us now proceed to the notice, that Delphic of Physicians. And the Prognosis in our Disease may be divided upon. It is but a slight Disturbance, sometimes leaves the Patient well; but if a Cough continues long time, it should not be despised. *Sylvius* in his *Praxis* observes. For if it get root, scarce go away without the Lungs: for any sale or humor, when evasated, by which it grows sharper and which the Lungs, that are of a thin texture may be eroded. A Cough that long continuance brings to a Consumption. Some

through violent Straining and
 orion of the Breast, or the Acri-
 ony of the latent Humors, the
 effels and Vesicles of the Lungs
 broke, whence spitting of
 blood, the fore runner of a future
 consumption, or Ulcer of the Lungs,
 proceeds. For a Cough proceed-
 from an Ulcer, or Abscess of
 these Parts is exceeding dangerous.
 Cough which before was moist,
 suddenly turns dry, with a hea-
 cess of Breast, threatens an exul-
 ation of the Lungs, and is there-
 fore dangerous. A continual Cough
 in an old Obstruction, the Lungs
 being indisposed or corrup-
 ed is hard to cure. A dry Cough
 with a little Fever, growing worse
 for Meat, and when the Patient can
 nothing, argues a hectick Fever.
 A dry Cough with much straining
 very dangerous in Women with
 child, and often causes miscarriage.
 the contrary, a Cough with little
 straining, alleviation, much and
 ready raising without Pains and
 fearfulness is without danger.

§. 12. Dietetick Cure.

WE have done with the Di-
 sease, we will now go to
 Cure. The benefit of an exact
 appears principally in preven-
 tion. Chuse therefore an Air tem-
 perate and enclining to dry, which
 is of great advantage in a Cough:
 one that is out of its due tem-
 perature, inasmuch as it is drawn
 with the Breath, or is circum-
 stant to the Body, or, as *Sylvius*
 says, have it, is swallowed with the
 Air, by the nitrous Acrimony
 of the Particles whereof it consists,
 especially in Winter time, hurts the
 Stomach and Lungs, as *Hippocrates*
 says. *f. 3. aph. 13. Coughs come in*
Winter; and f. 3. aph. 5. as also

f. 5. aph. 24. Cold things, as Ice and
Snow, are enemies to the Breast,
 thence arise Coughs and Destillati-
 ons. When therefore the Sun makes
 his farthest recess from us in *Capri-*
corn, Coughs are rise, so do *Virgo*
 and *Libra*, when they pour down
 Showres from the Clouds. Avoid
 every Air that is impure, cloudy,
 smoaky, and full of moist Vapors.

As to *Meat*, it must be tempe-
 rate, and such as by its mild and
 sweet Particles may assuage the
 membranous, fibrous and sensible
 Parts; let all sharp and high season-
 ed Meats, and such as render the
Serum fluid and sharp, be forborn;
 so must all things dried in the
 Smoak; for sharp Juices corrode
 and vellicate those Parts.

The drink must be the prison of
 the Ancients; or Medes, or a Deco-
 ction of Barley with Raisins and Figs,
 or the Ingredients for the pectoral
 Decoction described in the *Augustan*
 dispensatory. Large and hasty drink-
 ing of very cold Drink is hurtful:
 for I have observed a very trouble-
 som Cough come upon drinking
 but one draught of cold Beer or
 Water. Any new, thin and acid
 Wine, especially *Franconian*, is ex-
 ceeding hurtful.

Motion and Rest must be mode-
 rate, for too long and violent Mo-
 tion sharpens all Humors, especial-
 ly the *Serum*, and causes it to eva-
 scate. And too much Rest is hurtful,
 because it deadens the Spirits, and
 renders the Blood unfit for Motion.

Sleep and Watching must keep the
 same measure; for in excess they
 may cause many inconveniences in
 a Cough.

As for the *excreta* and *retenta*, the
 Belly must be loose by Art, if Na-
 ture will not do it. For if the na-
 tural and ordinary Evacuations of
 the

the Belly, Bladder or Womb succeed not, then *Serum* is gathered in the Body, and Coughs follow.

As to the *Passions of the Mind*, Joy and moderate Encouragements of Mind must be chosen. On the contrary, heavy Cares, Anger and Grief long continued are hurtful, especially the last.

§. 13. *Pharmaceutick Cure.*

NOW we will see, what Authors say of the Cure of this Disease; and first of all what the Opinion of the Ancients was. They in this Disease first of all render the redundant Humors in the Body obedient to Nature by Preparers; wherefore if the Cough be produced by a cold, thick, viscid Humor, then they use attenuating, inciding and deterfive Medicines; but if it proceed from a thin and hot Humor, they advise the use of incrasating and inspissating things. Their preparatives of the first sort are, Syrup of Hyssop, Horehound, Liquorice, Maiden-hair, Calamint, French-Lavender, Oxymel compound of Squills, Syrup of Vinegar, Honey of Roses, Decoction of Figs, Raisins, Liquorice, Maiden-hair, Hyssop, Horehound, Water of Scabious, Horehound, Fenil, Hyssop, &c. Preparatives of the latter sort are, Syrup of Violets, Poppy, Jujubes, Water-Lily, Myrtles and Water of Barly, which is reckoned very good. And when they have so corrected and prepared the peccant Matter, they Purge it off, and their Evacuators are these following, *diaturbith cum rhabarbaro*, *electuarium Indum majus*, *diaphænicon*, *electuarium rosarum*, *hierapiera*, *pilula coctia*, *aloëphangina*, *de sarcocolla*, *de agarico*, *mustichina*,

manna, *cassia*, decoction of leaves, &c. Here is a Receipt of two of the Ancients.

Take of a Decoction of Hyssop Fenil three Ounces; add *turbith cum rhabarbaro*, *electuarium Indum* each three Drachms, Syrup of Liquorice half an Ounce. Mix them. Make a Potion.

Take of pectoral Decoction Senna and Polypody three Ounces. In the colature infuse garick trochiscated fresh Drachm, choice Rhabarbar Scruples, Cinnamon one Drachm and an half. In the colature dissolve of *Antidotus Indum* two Drachms, Oxymel of Marsh-mallows one Drachm. Make a Potion.

And they use this Potion when the Cough is attended with thick and viscid Matter; but if it be a hot Cough they use only Calabrian Manna two Ounces of Calabrian Manna dissolved in Hyssop Water.

Then in a Cough they endeavor to avert the Matter, which they believe falls from the Head of the Lungs, by Clysters, Errhines, Bleeds, Issues and Baths, afterwards prescribe such things as may draw the Matter from falling on the Lungs; of which we have already sufficiently in the Chapter of Catarrhs. Last of all they order things, as may bring up the Matter to which they add things to make it more Spittle, are Syrup of Marsh-mallows, rice and its Juice, *diacapsacum*, *loboch sanum*, *pulmone vulpis*, *diapenidium*, Elecampane, *radix Iris* root. Let this be the Receipt;

of Sugar of Violets, Water-
ily each half an Ounce, *diatra-*
canth. sine spec. half a Drachm,
ice of Liquorice two Drachms,
ula bechica one Drachm, *sty-*
calamita one Drachm and an
lf, Myrrh, dried Roses, each
e Drachm, Tragacanth, Pine-
s each half a Drachm, Syrup
Violets what is sufficient.
ake an *eclegma* or Lohoch.

External Emollients are Oynt-
s of Marsh-mallows, Linseed-
fresh Butter, Oyl of sweet Al-
ls, Mucilage of Linseed, Fenu-
e, Saffron. Here is a Receipt;

of Powder of *Iris* two
rachms, Meal of Lupins, Pow-
er of Hyssop each half a
rachm, Saffron six Grains, Oyl
Chamomil, Line, White Li-
s each six Drachms, Mix
em with a little Wax. Make
Unguent.

their Corroboraters are, Treacle,
ridate taken twice a Week,
diatreos Solomonis, *loboch Sa-*
de pino, *diapenidium*, Maiden-
Berony, Syrup of Baum, *loboch*
alma, Decoctions of the Woods
um, *sassafras*, &c. And they
to the Crown of the Head a
of dried Roses, Cloves, Mace,
of *Nigella*, Cyprus root, yellow
er, *Ladanum* and *Syrax*. If a
come through excessive Ir-
on, some of the old Practitio-
do deservedly magnify a De-
on of Barley made with a mo-
e quantity of Sugar, and they
Narcoticks mixt with deter-
Medicines: for instance;

of Juice of Liquorice two
rachms and an half, Starch one

Drachm and an half, Saffron,
Myrrh each half a Drachm, *O-*
pium three Grains, *styrax calami-*
ta three Drachms, Syrup of Vio-
lets what is sufficient. Make
Pills. Give one Drachm at go-
ing to Bed. Or take an Ounce
of *Diacodium Augustanum*.

And when the Matter is near
ripening, and is sufficiently attenu-
ated, they will have a Decoction
of Figs, Raisins, Liquorice, Hyssop,
Violets, Quince-seed, Mallow-
root, &c. Fumigations also are of
use here. At last in a desperate
case they use Cauteries both actual
and potential, Blisters, Leeches,
Frictions, Scarifications, &c.

§. 14.

THe Chymists come next, who
by *Paracelsus* his *arcana*, that
is, by Depuration, do with success
Cure this Disease. If therefore
the Cough proceed from a viscid
Matter or Tartar, they magnify
Flowers, Tinctures, and Butter of
Antimony, Rubine, and Balsams of
Sulphur made with Gum, Myrrh,
Frankincense, Aloes, Saffron, *terra*
sigillata, &c. They say also, that
Oyl of Vitriol and of the Philoso-
phers is of great efficacy in this Di-
sease. Here is a Receipt.

Take of Water of Colts-foot, Speed-
well each three Ounces, Spirit
of Vitriol, Philosophers, Oyl of
Aniseeds, Fenil-seed each one
Scruple, Syrup of Liquorice,
Violets each one Ounce. Mix
them.

They also highly cry up Opi-
ates in this case, with this Caution,
That they be not given to such as
are

are weak, or have their Breast stuffed with Recrements: for though they abate the Cough, and procure sweet Sleep; yet they encrease straitness and difficulty of breathing. But they admit of *laudanum opiatum* in a small Dose mixt with abstersgents, upon urgent necessity, in the beginning of a thin and sharp Defluxion.

§. 15.

Helmont and his Disciples reject Purging as hurtful in a Cough, believing that the excrementitious Matter will not give way to Purging, though the spitting seem to be abated after Purging, for probably this proceeds from diminution of the melsaraick Blood, and from a more scanty dispensation of Aliment. Besides, Purgatives weaken the whole, and so do more harm than good. By his advice therefore a Cough shall be cured by Narcoticks. To this end he commends *laudanum Paracelsi* for liberty of breathing. For all anodine Remedies, endued with a restorative and asswaging Virtue, appease and quiet all mad Symptoms, which stop and remove degenerate Phlegm and Spittle, as long as it depends upon some fault in the digestive Ferment; and that, in right of the duumvirate of the Stomach, which being helped by Medicines is able by its general digestive Faculty, to correct all the Errors of the digestive Parts, the Products of Excrements in the Lungs; unless they come from some proper defect in the Lungs, through the corruption of their innate strength, and then they putrefy, whether the Stomach will or no. Among Anodines he reckons, *an-*

dimian saccharinum Sulphur of Flowers of Sulphur finely And the anodine Virtue of Medicine, appears hence, while it is yet in the Stomach reaches the Lungs, so as to encrease them. Smoak of Sulphur something, which peacens helps the Lungs, as it prevents Wine from corruption. Of so and Opiates, so prepared have what is mortal separated proper. For if one knew how to separate what is Mortal from Poppy, he certainly had given the best Remedies for a Cough. And this may be done by the quor *alkabest*, as *Gremius arboru ruinosu, lib. 2. c. 1. pulmonum defectibus*. The *laudanum Paracelsi* and his introduce Peace and Rest to the *Archens*, and put a stop to generate Digestion, check the and yellow Spittle, and make white and healthy. He commends the taking of pleurisy vulnerary Medicines in distemper

§. 16.

Utilis in a Cough upon three Indications. 1. He rectifies the disorder of the Blood, from whence Fluxions the *Serum* proceed. 2. He separates the Recrements of the Blood, which are apt to separate from the Lungs to the Pores of the Skin, or the urinary Passages, and the Emunctories. 3. He strengthens the Lungs against the susceprum and other Humors, and opposes them against the inveterate Cold.

The first Indication requires an excessive effervescence of the Blood, whereby the Blood, by

are flopt (for if we may
the *Sanctorius*, who weighed
exact balance the quantity of
we lose and perspire, more
measured in one natural day by
ble transpiration, than is in
days by stool) boils up too
in its Vessels, whereupon the
and other Humors are apt to
on the Blood. Therefore,
k this, the injury of the Cold
iligently be avoided, a thin
must be kept, transpiration
be procured, and a gentle
given Morning and Evening
Rosemary or Sage Posset-
and when these things will
il, we must proceed to let-
Blood, if Strength be suf-
Pectoral Decoctions also
d for this purpose, inasmuch
destroy the Acidity of the
and stop the dissolution
Blood, and its fusion into Se-
; therefore Medicines made
our are good.

Second Indication, that the
and other Recrements of the
being derived from the
may be evacuated by some
Emunctories, is performed
phoreticks, Diureticks and
Purgers. To this end
bleeding he gives a gentle
and repeats it several times.
He advises the giving of pe-
Decoctions, made of roots of
Butcher's-broom, and E-
ne. He commends Wood-
laril Salt of Amber and se-
Salts, and testaceous Pow-
Diureticks; to which end
ifies Turpentine Pills.
The third Indication he in-
suppression of the Catarrh,
guards the Lungs against
as of the Humors, and Inva-
Cold by Licks and Eclogues.

Then he has respect to two things.
1. That the Mouths of the Vessels
and Glands opening upon the *trachea*, may not discharge their Sero-
sities too much upon it, but that
they may be moderately closed by
Astringents; and 2. That the sides
of the Passages of the *Larynx* may
be sufficiently smoothed, that they
may neither be offended by suffu-
sion of a sharp *Serum*, nor by the
invasion of external Cold, nor be
continually irritated to a troublesome
Cough. For closing up the gaping
Mouths of the Glands, he com-
mends conserve of Red-roses, *oliban-
num*, *lobach de pino*. I shall give
young Physicians some of his Re-
ceipts, such as I my self have expe-
rienced;

Take of Oyl of sweet Almonds new
drawn, Syrup of Maiden-hair
each one Ounce and an half, Su-
gar-Candy two Drachms. Mix
them by rubbing in a glass Mor-
tar, or shaking them in a Glass,
till they grow white, then lick
it.

Our famous Author knows not
a better Medicine than this fol-
lowing, for a Cough, if there be no
fever;

Take of Tincture of Sulphur half
an Ounce. The Dose from six
to ten Drops, given Morning and
Evening in a spoonful of Syrup
of Violets.

For this end he commends Ba-
sam of Sulphur, of *Peru* and *opobal-
samum* from three Drops to ten.
Among trochiscs he has these fol-
lowing, often experienced by
us;

Take of Syrup of white Poppy six Drachms, Powder of red Poppy Flowers one Drachm, extract of Liquorice two Drachms, *lac Sulphuris* half a Drachm, Sugar penidiate two Ounces, with a sufficient quantity of dissolved tragacanth make a mass for Trochiscs; Or,

Take of *species diaireos*, *diatragacanthi frigidi* each three Drachms, Flowers of Sulphur, Powder of Elecampane-root, white Benzoin each one Drachm, add of *aleosaccharum anisi* one Scruple, the whitest Sugar dissolved and boiled up for Lozenges eight Ounces. Make Lozenges of half a Drachm's weight.

Among Pills he commends the following ;

Take of Powder of Elecampane root, Liquorice, Flower of Sulphur each one Drachm, Benzoin half a Drachm, Tar what is sufficient. Make them into small Pills. The Dose three or four Morning and Evening. He holds, That Decoctions of the known Woods are good.

In a chin Cough, which usually afflicts Children, and by reason of the stagnation of the Blood makes them black in the Face, he says, this following is excellent ;

Take of Cap-Moss three Drachms, *lac Sulphuris* one Drachm, Sugar Candy half a Drachm. Mix them, make a very fine Powder. The Dose, a Scruple twice a day.

§. 17.

Scribanius, for correcting phlegmatick and acid Humors that fall from the Head upon the *arteria*, and so cause a Cough, signifies Crabs-eyes, Coral, Pearl. And for correcting salt Humors, tragacanth, Arabick, root of mallow and its Sugar, root of liquorice and its Juice, *pitula glossa*, *de styrace*, or the following Lozenges;

Take of Seed of white Henbane, white Poppy each half a Drachm, *olibanum*, red Myrrh each one Scruple, the best Saffron one Scruple, Liquorice-Juice one Drachm, Sugar of Marsh-mallows half an Ounce, some Gum tragacanth dissolved in Rose-water. Make Lozenges according to the Art.

He uses these generally, when the Humors be thin; but when they are thick and viscid, he requires attenuation, then he prescribes *Oxymel* simple and compound, Syrup of Hyssop, or *de diantho*, *cibus*, to be taken by Spoonfuls. Here is one of the Ancient Receipts ;

Take of Water of Hyssop one Ounce, *Oxymel* of Squills five Ounces, Syrup of Hyssop, Mallow-sugar each one Ounce. Mix them. Let the Patient take it by Spoonfuls.

If the Cough arise from a Plethora of Blood, carried to the *arteria* from the Head or other Place, it may be cured by Bleeding of Blood, especially if it be

concur; and if the Heat be great, must be allwaged by austere things; for which purpose he commends the following Apozeme.

Take of Leaves of Plantain, House-leek, Woodfores each one handful. Boil them in Barly Water. To twenty Ounces of the Colature add of Syrup of Jujubs four Ounces, *lapis prunellæ* one Drachm. Mix them. Let the Patient take a draught of this Apozeme after every flushing, and sometimes a subsequent bleeding at the Nose.

And a dry Cough, according to our Authors's Opinion, arising from Cold Air or Drink, may be stopt by holding ones Breath: for so he cured himself. But if a dry Cough have its rise from tough or viscid humors, he orders Incisers, such as *schisfi bechici albi & nigri*, Elecampane root in Powder, made into Lozenges with Sugar: then he adds the carrying off these Humors by divers Evacuaters. And for Vapors and Wind which come any way from the *intestinum tenue* to the Lungs, and so produce a dry Cough, he will have them dissipated by Carminatives, such as Water, Spirits and Seeds that are carminative, &c. He cures a most grievous *arieness*, which lasts for several months, only by giving a few drops of Spirit of Sal Ammoniack every day in his ordinary drink.

§. 18.

The Cartesians cure a Cough successfully, by dulling and soothing the acute Particles, that irritate the nervous Membranes in the *aspera arteria* and the Lungs.

For which purpose he commends sweet things (especially if the Phlegm be salt, and erode the Throat) and Opiates, which also temper the Acrimony of the Humors, to wit, *laudanum opiatum Paracelsi*. See *Hornius* his *arca Mosis* p. 156. He says, that Vinegar of Squills is proper, if there be a mixture of viscid Phlegm. In excessive heat, they give testaceous and ponderous things, such as may dull these acute and cutting Particles, and imbibe them, just as Crabs-eyes, put in Vinegar, take away its sowreness. These Medicines are, Crabs-eyes, *lapis prunellæ*, Coral, &c. For a Purge they commend *Mercurius dulcis*, because it cuts Phlegm very well; but if the Phlegm be thin, they commend Opiates. In the rest they generally agree with other Authors and with Us.

§. 19.

Now we will give you our own Opinion. If a Cough therefore come from the *Larynx* being affected, or from the Irritation of a cold Air, things made of *Opium* and Poppy are proper, for they stop thin Catarrhs by thickning them, they in some measure allswage the troublesome Sense in the *Larynx*, and the Irritation in the *Pharynx*, and by these means hinder the plentiful expression of *Lympha* out of the Glands by the straitned Fibres. In the mean time a convenient temperature, proportionate to the touch of the *Larynx* is acquired; and so the Spittle appearing more concocted and thick, may the more easily be raised. In the foresaid Cough therefore we give Opiates with great success, such as *laudanum opiatum* prepared our way;

theriaca cœlestis, *diacodium*, *pilula de jyrace*, *tinctura opiata Wedelii*, *pilula de cynoglossa*. Here is a Receipt or two;

Take of *Sperma ceti* half a Drachm. prepared Amber one Scruple, *theriaca cœlestis Hanoviensis* four Grains. Mix them. Make a Powder for two Doses, one to be taken in the Evening before Supper, and then at going to Bed, in a little Broth, or in the following Vehicle;

Take of Fenil-Water, *loboch sanum* each one Ounce and an half, *syrupus de Erysmo Lobelii* one Ounce. Mix and give it.

Here is a Powder;

Take of *Sperma ceti* two Scruples, Flower of Benzoin, Myrrh each half a Scruple, *laudanum opiatum* three Grains. Mix them. Make a Powder for three Doses.

Poppy Medicines are good in salt Catarrhs. Here is a Receipt;

Take of *loboch de papavere* one Ounce, Syrup of Myrtles, *diacodium* each six Drachms, *species diatragacanthi frigidi* one Drachm, Bole Armenick half a Drachm, prepared Amber one Scruple. Mix them. Let the Patient take it by spoonfuls.

The following Lozenges are good; for I have always found them such in ferous Catarrhs;

Take of *species diaireos simplicis*, *diatragacanthi frigidi* each one Drachm, Myrrh half a Scruple, Bole Armenick prepared half a

Drachm, *confectio alhermes* Drachm, extract of Coltsfoot Elecampane, Lignaloes each a Scruple, Conserve of red Rose six Drachms, the whitest Sugar six Ounces. Mix them. Make Lozenges.

In this case, for the ordinary drink, a Decoction of the Whites especially of red Brazile with Pectorals, is good. But if the Cough be settled, and have its source from a fowre viscid Serum, located in the Vesicles of the Lungs, of high value, in order to cure it, adding and aromatick things, as Salts, bitter things, &c. and also all a Decoction of Elecampane with Currans, also Spirit of Salomoniac, *balsamus sulphuris* and *liquor cornu cervi succinatus*, taken by drops, with which last I have cured several inveterate Coughs. When this viscous and rough Matter is incided, corrected and made thin, we fly to Purgers, and have found the following Pills have better success than others.

Take of *pilula marocostina* Drachms, extract of Elecampane root of Angelica each half a Drachm, Oyl of Sulphur, *Essence* Fenil each six Drops, Powder of *Cardus Benedictus* one Scruple, prepared Amber half a Scruple, Spirit of Turpentine five Drops. Make a Mass of Pills, of which take half a Drachm.

If much Salt be mixt with the Humors, and the Throat be irritated by the sharpness, so that the Cause of the Cough is multiplied, some lick or Juice of Liquorice must be held in the Mouth, and this Cough the simple Juices

Asthma, the anisated must be taken. If there be heaviness, Spirit of Sal Ammoniack, according to *Sylvius*, will be good, or the following electuary.

Take of Juice of Cabbage clarified two Ounces, *saccharum penidia-tum* half an Ounce, Oxymel of Squills one Ounce and an half, Powder of Mallow-root one Drachm and an half. Mix them. Make an Electuary. Or *rob passu-latum*.

Harman, for cutting the viscid matter, commends the Liquor of Sugar, made with slices of Rish and Honey, also Spirit of Wine burnt with Sugar, which he calls *om sacchari magistrale*. But we rather forbear Sugar; for the sweet things that are commonly used are very prejudicial to Coughs, because they do not sweeten the blood, but rather exasperate and set the Lungs, which may be proved by what follows. For an acid Juice may be drawn off sugared things, so corroding, that it will hurt the Tongue, set the Teeth on edge, gripe the Bowels; yea corrode Metals, and dissolve Antimony. Which if nice People would well consider, they would not emaciate themselves so with sugared things, and throw themselves into various sicknesses. Hence also it may appear, how inconsiderately our Physicians act, who oftentimes in this Disease insist upon sugared things, as *Joh. Helfr. Junghen*, in his *Medicus presentis seculo accomodatus*, says very well. Neither can I imagine the Passages, whereby these sweet things may enter the Lungs whole, or dissolved, since not a drop of the most subtil Liquor can

get by the *aspera arteria* into them, without pain and choaking; and therefore there is a valve to hinder it. They cannot pass by the Stomach and a longer way without dissolution; and when they get thither dissolved, what do the dissolved acid Particles, but increase the Disease. Sugared things indeed have their use; but I never saw a consumptive Person cured thereby.

Let us therefore seek out such sweet things, as do change their Essence, but reach the Place in their full virtue, such as sulphureous exalted Medicines, and saline ones volatilized. We should therefore advise *Amatus Lusitanus* his Medicine for an inveterate Cough.

Take of yellow Sulphur half a Drachm, Benzoin one Scruple. Take it in a rear Egg in the Morning fasting and going to Bed. If there be hoarseness, this or some such Decoction will do good.

Take of husked Barley one handful, Currans one Ounce, Liquorice-root two Drachms, Cabbage-seeds three Drachms, leaves of Hyssop, lesser Centaury each one handful, fat Figs No. Vj. Boyl them in a sufficient quantity of common water. For every Dose, add a Drachm and an half of *Syrupus de Eryfino*. Mix them. Or,

Take of Cabbage Juice two Ounces, Powder of Florentine *Iris* two Drachms, Honey what is sufficient. Boyl them to the consistency of an Electuary.

If the Cough be desperate, and spitting of Blood concur with an effervescent Motion in the Blood, *Fausius* his pector 1 Decoction will

be good, which the forſaid *Junc-*
ken deſcribes. Or Onions or Gar-
 lick boyled may be eaten. But if
 the Cough ariſe from the Stomach,
 which is intraged by a Cough, a-
 bove all other things, we think, this
 viſcid and mucilaginous Matter,
 that lies in the Stomach, ſhould be
 caſt out: for which nothing is bet-
 ter than a Vomit; becauſe it gives
 preſent relief. Afterwards, for
 diſſolving the remainder of the
 acid mucilaginous Matter, and for
 relieving the Fibres of the Coats of
 the Stomach, this following will
 be proper.

Take of Water of Hyſſop, Mint
 each one Ounce and an half, Li-
 quor of Rhadiſh made with Su-
 gar one Drachm and an half, *Sper-*
ma ceti, Syrup of Tabaco, Hedg-
 muſtard each half an Ounce.
 Make a mixture, to be taken by
 ſpoonfuls.

Or *Sperma ceti* not rancid may
 be given with hot Broth from ten
 Grains to a Scruple, yea, a Drachm.
 Acids abate a Cough, if they be vo-
 latil, inasmuch as they infringe the
 Salt, and diſſolve Phlegm. The
 reaſon, why Acids move a Cough,
 is this, becauſe Acids, when they
 are taken do irritate the Throat,
 which is already in ſome meaſure
 excoriated by ſalt Phlegm, which
 Cough may preſently be ſtopt, if the
 Mouth be waſhed with cold Water.
 But theſe Acids muſt be volatil,
 for otherwiſe they would coagulate
 the Phlegm. Women with Child
 alſo are often troubled with a dry
 Cough, in curing of which *pilula*
de cynogloſſa, or *de ſtyrace* taken once
 or twice a week, going to bed, are
 good. Here is a receipt;

Take of *maſſa pilularum* de
 one Drachm. Make *Pilula*
 Grain weight. Let the
 take ſeven as ſhe goes to

Medicines of Myrrh are
 rempible in a Cough, from
 ſoever cauſe it proceeds.
 are ſeveral Externals, among
 we may reckon the follow-
 ment, for anointing the

Take of the pectoral Oynment
 Ounce. Greafe of a Badger
 each two Drachms, oil of
 from half a Scruple. Mix
 Make a liniment.

Or for the Soles of the Feet

Take of Garlick heads No. 12
 of a Hog what is ſufficient
 fiſh two Drachms. Mix
 Make a liniment where
 Soles of the Feet may be
 red. Which may be done
 the fat of a Pike-fiſh
 which acts by a peculiar
 ſpeakable Motion upon the
 and opens their ſuffings.

Other external, chirurgi-
 medics in a Cough, Vene-
 Cauteries actual and
 Bleeding, Bathing, &c.
 gathered from what has
 ceeded. Frictions and
 do but incommode the
 ent.

In a Hoarſeneſs with a
pilula de cynogloſſa and
 race, about five of them
 lowed at Bed-time, are
 and Raiſins may be ſteeped
 Spirit of Wine or Amia

and the Patient may take by spoonfuls. I highly value Ginger candied in *China*, all Medicines of Myrrh. a Cough also a Swan's-skin may be outwardly applied to the Breast, or the Breast may be anointed with Swan's-Grease. *Hæferus* in the Fit commends the putting of the Feet into warm-Water.

Q 4

CHAP.

C H A P. II.

Of an Asthma, or shortness of Breath.

§. I.

IN the preceding Chapter we have discoursed of the inconveniences of a Cough. Now a more dangerous and difficult disease follows, which in Greek they call *Asthma*; some call it *epilepsia* or *caducus pulmonum*; some, *difficulty of breathing* or *shortness of Breath*. It is commonly described to be, *a difficult respiration, sometimes with, sometimes without a Fever, sometimes with a noise and rattling, sometimes without, arising from an obstruction of the Bronchia and Cells of the Lungs, or rather, as some will have it, from a straitness of them.* The difference is threefold. For when the difficulty of breathing is but moderate, without a noise and Fever, it is called *dyspnœa*. But when the Patient cannot breath without a noise and thickness of of Breath, it is called an *Asthma*. And if the Disease be so urgent, that the Patient cannot take his Breath, except he sits upright, it is called *orthopnœa* or *upright respiration*. *Helmont* makes a two fold *Asthma*, a Woman's *Asthma* and one

common to both Sexes, and subdividing it into a moist and a dry one.

§. 2. Part affected.

NEXT comes the Part in which the Affair the consists, and some of the Physicians contend, That the Branches of the *aspera arteria*, disseminated substance of the Lungs, are affected; others blame the Heart itself for the Subject, being swayed on this ground, because such Persons, how difficultly ever they Breathe, yet they are not conscious of any shortness of their Breath, but only of the place, where they feel the grievance, under the diaphragm. *Helmont* shoots several bolts, he may hit the mark, for sometimes he acknowledges the Membrane of the Lungs, sometimes the Stomach, sometimes the Spleen, and sometimes the Splenic Part affected. Some blame the Muscles that lift up the Ribs, and reckon the Lungs are the Fan of Nature, together with all the Muscles

levate the Ribs, the chief whereof
 are the *ferrati postici*, upper and low-
 er, the *levator costarum* of Steno,
 and the *cervicales descendentes* of
 Diemerbroeck, an influx of the ani-
 mal Spirits being presupposed. For
 it is probable, that the *musculi le-
 vatores* or *patientia*, and the *rhom-
 boidei* do give their assistance in in-
 spiration, the *scapula* also assisting
 to lift up the Breast for larger inspi-
 ration, because the former arise
 from the *vertebra* of the Neck, and
 the upper ones of the Back, and de-
 scending a little are inserted into
 the *scapula*, which are fixt to the
 Back. And this more fully appears,
 because in asthmatick People, and
 such as are ready to dy, while they
 do their utmost to fetch their
 breath, the *scapula* are very much
 elevated. Yet we cannot be with-
 out the motion of our Lungs, for
 few Minutes of an Hour, without
 imminent hazard of our Lives,
 which when stoppt, the Blood must
 coagulate about the Heart.
 At here the Lungs are not affec-
 ted in all their Parts alike; for
 some suffer more nearly, others
 more remotely; and the *bronchia*
 Branches of the *aspera arteria*
 are most hurt in this Disease, not
 including the Vessels, and the
 sanguiferous Vessels, which carry
 Matter to the Lungs: For ac-
 cording as the acid Particles are
 entangled with divers Particles of
 Acid Phlegm, or with bilious or
 saline ones; so all Diseases hap-
 pening in the Lungs do vary, being
 either slow or swift.

§. 3. A Case.

Have a mind here to add a Case,
 very apposite to the business in
 hand. A Man above fifty years old,

of a sanguine Constitution, being
 very fat, had for three years and a-
 bove, been troubled with a grievous
 shortness of Breath, so that he
 could scarce walk an hundred Pa-
 ces, without fear of strangling. He
 in Winter-time, and a rainy Sea-
 son fell ill of extreme shortness of
 Breath, growing always worse to-
 wards Night, while this lasted, he
 was forced to rise out of his sleep,
 he beat his Breast violently with
 his Hands, lest he should be choak-
 ed; he had a dry Cough, yet with-
 out a Fever; he in vain gaped
 with open mouth at the Window
 for Air, he could not speak; his
 Urine was thin and red; viscid
 Phlegm ran out at his Mouth; and
 he breathed with rattling and a
 noise.

§. 4. Diagnostick.

BY the preceding Case one may
 know the attendants of this
 Disease. And it is pretty well
 known of it self; but for the bet-
 ter knowledge and distinction of Di-
 seases, besides what may be gather-
 ed from the Case, I shall recount
 a few things. There is therefore a
 thick and great respiration without
 a Fever, sometimes with shortness
 of Breath and a noise, which trou-
 bles Men more lying than sitting,
 the Breast is heavy, they Cough of-
 ten, but bring up nothing that is
 purulent. Sometimes this Disease
 encreases so, namely in an *orthopnea*,
 that they are forced to take their
 Breath, with their Body erect, lest
 they should be quite strangled;
 there is a wheezing, and sometimes
 a rattling, growing worse, especial-
 ly at Night. In a scorbutick *Asth-
 ma* there are puffings up of the Sto-
 mach, and painful Tensions of the
hypochondria

Of an Asthma, or shortness of Breath.

hypochondria, rumbling in the Guts, frequent Spitting, Belching, Heartburn, sometimes Vomiting, Palpitation of the Heart, Frights and Night-sweats, the Face is sometimes pale, sometimes shining and puffed up, the Urine sometimes high coloured, sometimes pale, red Gravel often sticks to the sides of the Chamber-pot, whence proceeds the obstruction of the Kidneys, and a gathering of saline Particles, especially in the Blood.

§. 5. Cause.

HAVING done with the diagnosis, we will now proceed to the Cause. The old *Galenists* come in the first place, who hold, that an *Asthma* comes oftneft of all from a thick and viscid Phlegm, which sticks sometimes in the Passages of the *aspera arteria*, sometimes in the Lungs themselves, where that Phlegm comes from some where else, that is, from the Head, or is bred there. For they doubt not, but many superfluities of that sort may be bred in the Lungs, which Phlegm in a desperate Disease they think by means of Heat may be turned into a vitreous and clayie one, yea, and into Stones. They reckon also that this may afflict a Man, because of straitness of Breath, and its bad conformation; nor do they exclude Vapors ascending from below to the Lungs from breeding an *Asthma*.

§. 6.

Paracelsus his followers blame mineral Fumes lurking in the *chaos*, impregnated with the virtues of the Stars, drawn in by respirati-

on and infecting the Lungs; yet do they wholly neglect the opinion of the *Galenists*, that Phlegm may ly in the Lungs, which if it do, the Air cannot penetrate; whereupon the Phlegm grow out of breath; and then Phlegm is dried in the Pipes, they think, that a perpetual Cough may be raised. As for external Causes, *Paracelsus* admits divers *metallor.* namely, external Cold, Frost, Rain, Clouds, of Stars, sowre Porions, Acid, Vitriol, of Alum, subterranean saline, sulphureous, mineral, arsenical and other Fumes. In another place he does not deny, but a Tartar bred in the Lungs, and that this Disease may be bred.

§. 7.

Helmont, who is above all the *dicaments* and predilections, after his usual manner, laughs at the Opinions of the foresaid *Galenists*, who ascribe the original of this Disease to Phlegm falling in the Lungs, that is, in an imaginary *tarrh*. He gathers it from the fact, because an *Asthma* seizes suddenly, just as if a Rope were cut about a Man's Neck; and he goes off without voiding Phlegm, and though sometimes a little be voided, that must be ascribed to the occasional cough, but rather to the effect, than to the great coarctation, and impediment to the Lungs. He also follows their Opinion, who hold, that Steams and Vapors arising from the Earth, may cause an *Asthma*. And he says, that the falling sickness of the Lungs, cause it has its seat in the Lungs. He says, likewise, that

of this Disease is a more pe-
 ar Poyson, which affects the
 by its property, than that
 ch casts the Head and the whole
 into an Epilepsie. He also, as
 have said, makes a twofold
 ma, a Woman's, and one com-
 to either Sex: For there ari-
 a Poyson from the Womb,
 whose life and power rules the
 (the Woman) which contracts
 Throat, and straitens the Lobes
 Pores of the Lungs. He also
 That an *Asthma* is either dry
 moist; the dry, according to him,
 usually interrupted, which never-
 less violently disturbs the whole
 dy, and compensates the inter-
 by its grievousness: This *Asth-*
 has its seat in the Spleen, where-
 he calls asthmatick People sple-
 ick. But in Women he will
 ve it in the Womb, whence that
 is truly miserable, for he (and
 also) hath seen Women, who by
 elling sweet Scents, besides
 ad-aches and danger of Swoon-
 have fallen into extreme diffi-
 y of breathing. For the *Ar-*
 either of the Spleen or the
 omb primarily affects the innate
 rit of the Lungs by the action of
 giment, whereby an *Asthma*, like
 Epilepsie, is bred; wherefore
 calls it the *Epilepsie of the Lungs*,
 cause this Disease agrees with an
 iplepsie. And he concludes as
 ch *a posteriori*, namely from the
 antia: for whatever cures an E-
 iplepsie, cures an *Asthma*. He main-
 also, That an *Asthma* has its
 in the Stomach; and he en-
 avours to prove it, because some-
 es by giving but one Vomit, the
 ease is perfectly cured, and be-
 ause it proceeds from the corrup-
 on of certain Meats. He derives
 moist *Asthma* from abundance of

Matter, which is occasioned by
 some fault in the Lungs themselves,
 and it generally troubles old Men,
 and such as are near death, and con-
 sumptive People. Afterwards it
 breeds mucilaginous stuff, either,
 because of an occult Inposthume,
 or some other Injury done to the
 Lungs. About which, if you would
 have more, you may consult the
 Author himself, *de Asthmate & Tus-*
si. But lest we should be too tedi-
 ous in hearing *Helmont*, we will be-
 stow a little time upon the fa-
 mous

§. 8.

Ullis, who calls this Di-
 sease the King of the rest
 of the Diseases of the Breast; for this
 reason, because there is nothing
 more terrible than the Fits of this
 Disease. For Patients are shaken
 by it, as by an earthquake, because
 respiration, by which we live, is
 hindred, and sometimes quite abo-
 lished, which must cause death.
 And as for the cause, he, as well as
Helmont, rejects Vapors ascending
 from the Spleen, Womb, Mese-
 ntery, Stomach and other Bowels to
 the Lungs; because no asthmatick
 Body ever falls into an *Asthma*,
 without some manifest fault in his
 Lungs, there being no fault in the
 foresaid Parts, nor any straitness of
 the *bronchia*, which People talk so
 much of. Therefore he assigns, as
 the only cause of an *Asthma*, the
 convulsions of the Motive Parts.
 For, according to him, a hetero-
 geneous Matter, injurious to the
 Spirits, falling out of the Brain in
 a little quantity, gets into the Coats
 of the Nerves without much harm;
 but if it amount to any quantity,
 and possess the nervous and mus-
 culous,

culous, pneumonick Fibres, serving for respiration. then it molests the inhabiting Spirits, and puts them into asthmatick Spasms. Nevertheless he denies not, but an *Asthma* may sometimes arise from straitness and obstruction of the *bronchia* by a thick and viscid Humor, purulent Matter, extravasated Blood, Swellings, *scirrhus*, or Stones, &c. Among occasional causes, he reckons all things which cause the Mass of Blood to ferment, as all violent Motions both of Mind and Body, immoderate *Venus*, anger, heat of the Bed, &c. For he often observed (as I did in the foresaid case) that asthmatick Persons are always worst in Bed.

§. 9.

Sorbius in an *asthma*, *orthopnea* and *dyspnea* blames bad Vapors and Wind, chiefly austere ones, produced in the *intestinum tenue* of Phlegm, rarefied by Bile, arising partly by the Stomach and *œsophagus* to the Mouth, and then drawn in with the Air into the *bronchia* of the Lungs, and passing partly by the lacteal Vessels and thoracick Duct, then these fill and straiten the soft Lobes of the Lungs, and so hinder respiration. Nor in an *Asthma*, especially an *orthopnea*, does he exclude viscid Phlegm, falling from the Head into the *bronchia* and straitening them.

§. 10.

NOW let us see what the famous Cartes and his followers, *Regius*, *le Grand*, *Hogeland*, *Bræchusius*, &c. say. But before we come to the faults of respiration, it will be worth the while first to con-

der the true cause of the shortness of the Lungs, according to mind, that we may the more know the defect of them. Therefore, to explicate the cause of respiration, the *Cartesians* hold that the Air is a subtle æthereal Matter; and will have the Air only by its forward from the Breast and so to raise Motion in the Lungs, so to display them. Then, the Motion of the circulation is continual, which must necessarily be attended by a Motion of the animal Spirits, which Spirits and Nerves do pass and travel through the intercostal Muscles, the diaphragm, &c. Nor can any one wonder, that by the opening of one Pore in the Lungs, the Spirits flow into many Tubes, cause the Tubes of the Nerves to contain many Fibres under the same Membrane. Therefore according to the Lungs, puffed up or contracted in the whole substance; where comes to pass, when a large Air is allowed to the Breast, it void a vacuum, the external Air some quantity is always drawn inward, till the antagonist Muscles, those other, which are employed in expiration, receive the Motion of the Spirits; and so the Lungs, serving for inspiration, like a want of Wind, flag, when the Muscles designed for expiration are contracted by the Spirits drawn out of the former, and the latter. And *Bræchusius* in *De anima animali*, p. 175. believes that inspiration and expiration are formed by the animal Spirits, which are then become total, the Muscles, while the animal Spirits are continually puffed up, and ing to the various mixture

§. II.

THIS was the *Cartesian* Opinion, now we will give you our own. First of all, however, we shall in general premise something concerning respiration. We think therefore that the Air, when the Breast is dilated for inspiration, does enter the Lungs, and they must of necessity be coextended to the cavity of the Breast; and in expiration, since the space of the Breast cannot be lessened, but by contracting it self in again, the Air must of necessity also be forced by the Breast out of the folding Lungs. The Lungs therefore are moved, not, as some would have them, by their own proper virtue, nor by the Heart, nor for fear of a *vacuum*; but the Air is the true and adequate cause of respiration, especially on the confines of the Globe of the Earth, where the Air has acquired a certain consistence and density. I could add several things about the elasticity and weight of the Air, and its Motion resulting from thence, to explain the obscurity of respiration; but since these excellent Persons, the magnificent *Ottog de Gueriken de vacuo*, the Illustrious *Boyle in Experim. physic. mechan. de aëris vi elastica*, and *Majou in his tract de respiratione* have performed that task compleatly, I reckon it needless to treat curiously of all these things, and the rather, because it belongs more properly to a Philosophical enquiry. The motion of the Lungs and Heart is so necessary, that we cannot be without it a few Minutes of an Hour, but with hazard of our lives, which *Boyle's Air-pump* shows, in which, when the Air was exhausted,

sted, and not admitted again, Birds and Mice died within two, three, four, five, six or seven Minutes at most. We have hitherto been upon respiration in general with respect to the Air: if we consider it more particularly, the Heart moves by *systole* and *diastole*, and those Motions are helped by the dilatation and expansion of the Lungs. There was an erroneous Opinion of old, that the Motion of the Lungs and Diaphragm was performed in the manner of Bellows, and that they were filled, because they were distended, but this Opinion is built upon a rotten foundation. Without doubt there are several uses of respiration; the ventilation of the Blood, the exportation of fuliginous *effluvia*, the importation of nitrous Matter, the mincing and pounding of the Parts of the Blood, the pression of it into the Guts, the mixture of it in the Heart, the forwarding its Motion out of one Ventricle into the other, and the last perfection of the Blood by means of saline Particles in the Air, performed in the left Ventricle of the Heart, which subtilise the Blood, and fit it for breeding of animal Spirits: for there are saline, volatil Particles in the Air, wherefore it is called the secret Food of Life. And we think it probable, That the Lungs in respiration are not only puffed up and distended by the pressure of the Atmosphere, but by the elastick virtue of the Air. For Air is apt to get in at any hole; yea, it is very difficult to keep it out of the Air-pump as *Boyle de aere*, p. 196. shows. The Air by the Mouth and Nostrils rushing into the *aspera arteria* or *larynx*, insinuates it self into the Cavity of the

Lungs, and by the heat of it is much rarefied and dilated, expansion being made, in an elastick virtue, whereupon the Lungs are puffed up, and get a greater space. And, if it is mistaken, respiration seems nothing else, but the reciprocal reciprocation of the Air in the Breast, and an alternate motion of the Lungs and Diaphragm, always however in a notable influx of the Air into the intercostal spaces. There is no reason to the contrary, therefore, why we may suppose the external Air the first cause of the whole Motion: for Air is presently, when Air is taken in, as *Boyle* in his *Physical Experiments* does expressly show. In short, two things are required for the performance of respiration naturally. 1. That a free Passage be granted to the ingress and egress of the Air, without the pressure of the Atmosphere. 2. That the Air may be made to exert its elastick virtue duely to expand the Lungs. As observed before as these Passages are obstructed by the expansion of the Lungs, hindered by any cause, respiration is variously hurt or diminished. An *Asthma* therefore (which may come to what we call *the asthma*) sometimes the bronchial tubes of the Lungs are filled with viscid Phlegm, Pustules, tophaceous Matter, &c. as *Diemerbroeck* in his *Anatomia* § 10. has illustrated by the observation of dust gathering in a Servant, which breeds in the Vesicles of the Lungs an *Asthma*, which kills at last: there are other such cases in the German *Ephemera*.

question also, but a pontick Salt the Air falling upon the Throat, so injuring the Vesicles of the Lungs, may produce this Disease. Sometimes also in a *dyspnœa* and *orthopnea* the expansion of the Lungs is hindered by want of Air that could pass to the Lungs, but through excessive rarefaction and elevation of the Blood, sometimes its stagnation, when it clots in narrow Passages, sometimes by convulsive irritation of the Nerves, which serve the Organs of Respiration; and so we hold, an *Asthma* may arise. In some asthmatick the Lungs being elevated and distended cause almost suffocation, which cannot come from Wind or Vapors: for Wind contained in the pulmonary Veins and Arteries can puff them up (since though we fit a Pipe to the pulmonary Artery, and blow in it, the Lungs will not) nor can Vapors do it, if they be contained in the Vesicles, they cannot easily be expelled with the Air. Wherefore, the nearer the Point, we look that such Choakings proceed in the intercostal Muscles, and the Diaphragma being convulse. For their convulsion the Breast is too long in dilatation. In another case also we see how in hypochondriack and scorbutick Persons, want of respiration puts them in imminent hazard of their Lives; as was observed in a Woman who died of it, through the excessive regulation of the Blood in her Lungs. So likewise this Disease may arise from a sharp, lixivious, and too bilious Blood boiling preternaturally in the Heart, so that the Lungs remain puffed up, and respiration is stoppt: for this viscid Blood sometimes rushes vio-

lently into the Lungs, compressing its *bronchia* and Vesicles, and distending the sanguiferous Vessels, so that the Lungs cannot be duly relaxed and expanded again for the recentration of the Air. A moist *Asthma* (for we, as well as *Helmont*, hold there is a moist and a dry one) we derive from a viscid mucilage, lodged as well in the *bronchia* and Vesicles of the Lungs, as in the Stomach. Sometimes this Disease follows a little stagnation of the Blood in the *præcordia*: for we are verily perswaded, it may arise from a crude, viscid, acid and austere Blood, and a serous chyle; because sometimes the chyle being carried into the right Ventricle of the Heart, by reason of its crudity and viscosity does not well rarefy; but being apt to stagnate and settle in the Heart, it increases its oppression: To relieve which, there comes a frequent respiration, that when the Blood is pumped into the Lungs, it may be relieved. Compare *Willis de feb. cap. 2.* with *de scorbut. c. 3.* Hence we find that several hypochondriack Persons an hour or two after Meal, or after motion of their Body, are troubled with difficulty of breathing, inasmuch namely as a crude chyle is brought into the Blood. So an acid Humor, mixt with the Blood, by coagulating it more or less about the *præcordia*, and disturbing its equal circulation, must notoriously stop respiration, as the famous *Ettmüller* in his *chirurgia infusoria* proves, who says, that a friend of his poured Spirit of Nitre into the subclavian Vein of a Dog, which in a little time breathed with difficulty, and at length died, and there was coagulated and clotted Blood found in that Vein and in the

Heart

Heart. The foresaid Physician tried another Experiment to the same purpose; he put a Drachm of Oyl of Sulphur *per campanam* into an Ounce of Water, and better; he poured it into the crural Vein of a Dog; he tied up the Wound, as it ought to be, and let the Dog loose, which being brisk, his Eyes staring wide open and clear, laid him down, and began to draw his Breath faster and faster, till at length he had some small Convulsions in his Mouth, then he breathed faster, and had a rattling in his Breast, he had now and then a convulsion Fit, till at length he died within half an hour after the Infusion. After he was dead, abundance of serous Matter came out at his Mouth, red like the washing of Flesh, abundance of viscid froth swimming at the top. When the Jaws of this Dog were opened, they and the *aspera arteria* were full of froth. When the *larynx* was squeezed on the outside, the Lungs looked of a dark red, especially over against the Ribs, as if Blood had settled there after a Contusion, and the Lungs, like sponges, were full of a bloody and frothy serum, that is, of abundance of little viscid Bubbles, and all the Branches of the *aspera arteria*, great as well as small, were in a manner obstructed with this froth. I tried the like in a Dog. See the English Philosophical Transactions Ann. 1667. n. 27. And I opened a Citizen, who died of an Asthma, and could attribute his death to nothing but to Blood coagulated in the pneumonick Vessels and the Heart, just as *Majou* found the pulmonary Artery and Vein, full of grumous Blood, in a young Man, who was taken with shortness of breath upon any quick

Motion. And none, that know any thing in Physick will deny, that a dry and convulsive Asthma arise from some fault in the Nervous and animal Spirits: for the pneumonick Nerves, designed for the expansion of the Lungs, being thus irritated spasmodically contracted, may hinder the reciprocal Motion of the Lungs; as the nerves of the *bronchia* being irritated, may so contract them, that the *larynx* may be quite stop'd, and Man may be strangled, because sufficient Air cannot be admitted to the Lungs or Blood. The same Nerves denying a Passage to the animal Spirits upon account soever; that is, if they be obstructed or broken, may be the Cause of this Disease: as *Sibbenius* saw the Motion of the *larynx* taken away by cutting the Nerves. In a convulsive Asthma there is only a Cough or Ejection of Blood; it ceases also for a time, and returns periodically, according to the Motion of the Moon. *Boerhaave* observed an instance of this in his Chamber-fellow at *Paris*, who, in an apoplectick Period, after he was recovered of that, had a Palsy in his right side. The Motion of the Lungs may be hindered from without the Breast, when the Diaphragm has not room to move downwards, which happens when the *hypochondria*, Stomach, or whole abdomen is distended with Wind or Water, or when the spasmodick contractions in the intestines, for then the peristaltic Motion being inverted, the Diaphragm is forced towards the cavity of the Breast; so we see in the Dropsy, Tympany, Overgrowth of the Liver, being with the same for Women towards the last

their time complain of shortness of Breath. Sometimes foul, malignant Furnes of Charcoal, Metals, and Mercury (as in Chymick and Goldsmiths) may cause an Asthma. There is a wheezing in the mouth of the Windpipe, so the Air cannot get through, but a whistling and a noise. He takes his Breath easiest with the body upright, because the Bowels by their own weight are drawn downwards, and so room is made.

§. 12. Prognostick.

Now follows the Prognostick.

In general all hurts of respiration are dangerous. In hypochondrick and scorbutick Persons, they are dangerous, nor incurable in themselves; yet because of the noxiousness of the Place, and the coagulation of Blood in the Heart, they are not without danger; as long since I saw a scorbutick man at Hanover, who not long died only of a dry or convulsive Asthma in two hours time, with Senses entire, and without any dangerous Symptom preceding. The Disease uses to come at certain times of the Moon, and Seasons of the Year, especially Winter and Autumn; and by using proper Remedies it may be kept off a long time.

But a scorbutick Asthma is a venereal Disease. A serous, preternatural Asthma is easier to cure than a paralytick one, which comes from a depauperated, spiritless Blood. A scorbutick Asthma easily turns to another Disease, namely an Epilepsy, suffocative Catarrh, Epistaxis, Consumption, Cachexy or Dropsy; as Timaeus l. 2. has observed. Moreover an Asthma is scarce

cured in old Men, in young Men often. This Disease is often acute, and the violence of the Fit often kills a Man; but the serenity of the Air, sobriety of life, and rest of Body (of which hereafter) abate its violence. They that have naturally a strait Breast and small Lungs; and those that have very large ones, are apt to be asthmatick. An Asthma with swooning, a languid, intermittent, unequal, disordered and slow Pulse, argues death to be near. A trembling Breath is also dangerous, and so much the more, if the Shoulder-Blades, and intercostal Muscles rise and fall at the taking in and letting out of the Breath, especially if the strength is low.

§. 13. Dietetick cure.

This was the Prognostick. As to the cure, and first the dietetick, it now falls under contemplation. Among the Non-natural things, the Air is the first, which must be temperate, serene and dry, but not very hot; yet cold must be industriously avoided; for through the connivance of the Pores the Body exhales not, and the condensed Humors are difficultly got out at the usual Emunctories, and so injure the Lungs and their vesicles. An over-hot Air is hurtful also, inasmuch as the turgescient Blood, like new Wine, throws abundance of serum upon the Lungs and Branches of the *aspera arteria*, and infects the whole Mass of Blood: for what such the Air is, such generally is the Mass of Blood. Let sweet Scents be avoided, by Women especially, for the Womb is enraged thereby.

The Meat must be easie of concoction, heating and attenuating,

est the Matter grow thick; it must be mixt with moistners; Hens and Chickens are good. All a Man's meat must be seasoned with pectoral Aromaticks, namely, Marjoram, Thyme, Hyssop, Fenil, Aniseed, &c. Saffron is good here, whatever *Septalius* says to the contrary; so are Almonds, Raisins, Figs, &c. inasmuch as they smooth. On the contrary, let the Patient forbear all things that breed a thick and tough Juice, such as Flesh dried in the Sinoak, Pork, Milk, Cheese, dry Pulse, &c. As for the Drink it must be a fine and small Wine; or one made of several pectoral Herbs and Spices. For Rusticks a decoction of Horse-dung may serve in Summer-time, or of Barly. Sweet drink made with Sugar must be forborn, and Spanish Wine, by posterous using of which *Helmont* *trakt. de asthma & tussi*, §. 10. observed an Asthma produced.

As to Exercise, it must be small; yet a little walk before Meal may be allowed; and in weak People Frictions of the out Parts may serve instead of it.

Sleep must be moderate and in the Night, sleeping in the Day and a long time must be avoided: for by long sleep many phlegmatick Excrements are gathered, which often cause our Disease. So Watching over-long, according to the great *Hippocrates*, 2. aph. 3. may mischief the Lungs.

The Belly must be kept continually loose, to avoid irritation. Hitherto also b. long all usual evacuations, especially of Blood which ought to keep their ordinary course.

We may add to these the Passions of the Mind, which must be moderate. One would think that Joy

should do good; but one may easily gather from what has been said, That excessive Care and Anxiety, as well as excessive Motion and Labour, cause an Asthma. *Helmont* writes, That this Disease arise from Anger, sad Thoughts and Chiding; for this renders that the Pores of the Lungs are constricted by Anger, Fear, &c. through that Obstruction the Spirits are irritated, and enraged by the same Ferment, and so cause the Disease.

§. 14. Pharmacopœia

BUT beside these helps, we go to stronger Remedies, they are Pharmacopœia, or Medicaments in the cure of this Disease, for correcting and carrying off the acrid Phlegm, first give this such Clyster;

Take of root of Birdseye each half an Ounce, lesser Centaury, Hyssop mint each one handful, Agarick five Drachms, add to a Pint of the Colic species hiera diacolocynthidis one Drachm and an half, cum rhabarbaro five Drachms of white Lilies, Chamædrys each one Ounce, common Marsh-mallows one Drachm. Mix them with a Clyster.

Then, when the Disease is more truce, they render the passages more free, by the means which oppress the Lungs, fill the *aspera arteria*, obstruct the free passage of the Air, by the Nature, by Preparatives and Remedies. Their Preparatives are of Roses, Oxytel simple

and, of Squills, Vinegar of
Squills, Decoctions of Elecampane,
Dodder of Thyme, Liquorice,
Wool-hair, Hyssop, Horehound,
Squills, Eetony, Raisins, Figs,
&c. *Guaiajacum*, distilled Waters
of the same Herbs, Myrrh, Gums, &c.
is a Receipt or two;

One of Syrup of Liquorice half an
Ounce, *Oxymel* of Squills one
Ounce and an half, *loboch* of Fox
gloves six Drachms, Gum Am-
moniac dissolved one Drachm.
Mix them. Make a lick. Or,

One of root of Elecampane, Gen-
tian, Fox-Lungs each two
Drachms, species *diatreas* four
Scruples, Honey of Squills what
is sufficient. Mix them. Make
a lick. Or,

One of Flour of Sulphur one
Ounce, Benzoin one Drachm,
Myrrh half a Drachm. Mix
them. Make a fine Powder. Give
a Scruple of it in a reer Egg,
with a little common Salt.

Afterwards they endeavour to
draw off the Humors so corrected
and prepared, by gentle Purgers.
For Purgers are Trochiscs of A-
garick, *diatribith cum rhabarbaro*,
& *aloëphangina*, &c. Here is a
Receipt;

One of Mass of Pill *Cochia* one
Scruple, of Agarick two Scr-
uples, the best Rhubarb half a
Scruple. Make Pills with Syrup
of Liquorice. Or,

One of *diaphenicon*, *cassia* new
drawn each half an Ounce, Tro-
chiscs of Agarick one Scruple.
Mix them, and with Sugar

make a *Bolus* for once taking.

The Ancients also hold. That Vo-
mits are good in an *Asthma*, be-
cause sometimes Phlegm is lodged
in the Stomach; therefore they give
a Vomit of Radish root and white
Hellebore, and that to good pur-
pose: But they would have Men
forbear both these and Purgatives
in the time of the Fit; lest the
Matter being disturbed by Medicine
should all run into the Lungs. Then
they endeavour to divert the pec-
cant Matter by Frictions, Errhines,
Sternutatories, Apoplegmatisms
and Cupping-glasses: At length they
give things to mollify and raise
the Matter lodged in the Lungs, by
the *aspera arteria*; in the number
of which are things that promote
Spittle, and strengthen the Breast
and Lungs; such as Syrup of Li-
quorice, Jujubs, Hyssop, *loboch sa-
num*, *de pul. one vulpis*, Squills, *Mille-
pedes*, Decoctions of Figs, Raisins,
Hyssop, Liquorice, Honey, &c. Saf-
fron. An Ointment may be made
for the whole Breast, of Oyl of Lin-
seed, sweet Almonds, Dill, Rue,
white Lilies, Chamomil, fresh But-
ter, Hens-grass, Mucilage of Fenu-
greek, Marsh-mallows, Saffron and
Iris root. Divers Receipts of which
you may find among Practitioners.

§. 15.

WE have hitherto been tak-
ing a view of the Schools
of the Galenists, we will now go to
the Furnaces of the Chymists.
Who, according to their Master,
insist upon a double Cure, and a
double Indication. For if Patients
bring up Phlegm, they dry; if not,
they loosen. Their Cure is with
Sulphur vive, Myrrh and *alupa mas-*

cata. As to the second Indication, *Paracelsus* advises to abstain from cold things in purging the Lungs, because such things are hurtful to the Lungs. He loosens what is dry, that it may the more easily be brought up, by *Elixir de tartaro crudo, essentia vini essati, i. e. sublimati, Baum-Wine, &c.* In the Asthma of Miners *Paracelsus* prescribes several Medicines, as well preservative as curative. He highly extols Diaphoreticks, and the following receipt;

Take of Liquor of Tartar two Ounces, Oyl of *Colcothar* one Scruple, pure *Laudanum* half a Scruple. Mix them. The Dose three Grains once in a Month.

He commends *Manna Calabrina perlata.* He says, That Water of Sow-bread is a secret, which cures any Asthma without putrefaction. He commends Conserve of Roses, and *sal-vitrioli dulce*, which rectifies the Lungs. Some of his Tribe commend Balsam of Sulphur, simple and with Turpentine, Flowers of Sulphur, &c.

§. 16.

Helmont holds, that an Asthma cannot be cured by any Remedy, unless it penetrate throwly, so as to conquer an Epilepsie. Therefore, according to him, generous strengthening Medicines are good for a moist Asthma, in regard both of the Lungs and their *archeus*. And all Antiepilepticks are good for an Asthma. So *Grembs*, *Helmont's* disciple, mentions one *L. 2. c. 1. §. 9. de pulm. defect.* who was perfectly cured of the Epilepsie of the Lungs, that is, of an Asthma, by taking se-

ven Grains of Cinnabar of India ny once a day for a Month. He commends *balsamus sulphuratus thynatus* taken thrice a day in matrick Water, also Flowers of sulphur sublimed with Saffron Myrrh, and other things.

§. 17.

This in an Asthma involves two things; The Fit the Patient may be freed from present danger; and the morbid Cause may be removed so as the Fit may not come ten. Therefore while the Patient must sit with his head upright; and all endeavours to be used, that the Lungs and *arteria* may not be stuffed with Matter, or oppressed internally. And that the Patient may not press the Diaphragm upwards, and so straiten the passage it will be convenient to give a laxative. Also lest the Blood ferment too much in the pulmonary Vessels, or lest the serum fall too violently upon the Arterial Ducts, all impetuous motions must be stopt, Blood must be evacuated, and such things must be used to evacuate the serum and superfluous of the raging Blood, by Stagnation of the Urine, from the Lungs. Here is the receipt;

Take of Water of Ground Ounces, *lobach sanum* one Ounce and an half, Water of *lobach* two Ounces, *sal prunellae* Drachm, Syrup of red *lobach* one Ounce and an half. Mix them. Make a Julep.

He also commends fix of Tincture of Sulphur given

and Evening in the foresaid Ju-
or the following Powder;

of *facula ari*, *bryonia* each one
Drachm and an half, Flowers of
Sulphur one Drachm, *benzoin*
half a Drachm, Sugar-Candy half
an Ounce, Powder of Liquorice
two Drachms. Mix them. Make
Powder. Give half a Drachm
twice or thrice a day.

where a Man finds abun-
dant of viscid and rough Matter,
prescribes this following;

of *aqua asthmatica* one Ounce
and an half, Syrup of Horehound,
Slick, Tabaco each half an
Ounce, Tincture of Saffron, Ca-
stor each half a Drachm. Mix
them. Let the Patient take a
Spoonful or two of this mixture.

of Water of Snails, Worms
each two Ounces, Syrup of
Horehound, Oxy-mel of Squills,
Spirit of Sal Ammoniack, with
Gum Ammoniack two Drachms.
Mix them. Or, for the Poor;

of Powder of Hedge-mustard
ground-Ivy one Ounce. Mix
them with a sufficient quantity of
Oxy-mel, for a *Linctus*.

this was the first Indication. The
second was, That the motive Parts of
the Lungs might be freed from
the Matter. For which end he advi-
sed to have recourse to antispasmo-
dics, as to the last refuge; such
as Tincture of Castor, Amber, Spirit
of Saffron, Soot, sal Ammoniack
Tincture of Sulphur, *asa*
foetida, Oxy-mel of Squills; and un-

less there be a great stuffing of the
Lungs, and oppression of the *præ-*
cordia, Opiates will be admirable
good, inasmuch as they reduce the
enraged animal Spirits into order:
wherefore the Author has often
given *diacodium* and *Laudanum tar-*
tarifatum with good success. And
in the Fit, that he may divert the
Matter to another place, he advises
Blisters, Cuppings, Frictions, pain-
ful Ligatures, yea, and Vomits in
the very Fit. Now what he does
out of the Fit, consists, 1. In a-
mending the conformation of
the Lungs. 2. In removing the
disorders of the Spirits, which are
designed for the Lungs. He uses
the following Remedies;

Take of Gum Ammoniack and *Bdel-*
ium dissolved in Vinegar of
Squills half an Ounce, Flowers
of Sulphur two Drachms, *Ben-*
zoin one Drachm. Mix them.
Make small Pills. Take four or
five of them in the Evening.
Or,

Take of prepared *Millepedes* two
Drachms, Flowers of *Benzoin*,
Salt of Amber each two Scrup-
les, extract of Elecampane, Ca-
stor each half a Scruple, Saffron
one Scruple, Turpentine what is
sufficient. Mix them. Make
Pills. Take four every Evening
and Morning. Or,

Take of water of *Loboch Sanum*,
Snails, Worms each one Ounce,
Elixir Pectorale, Spirit of Gum
Ammoniack distilled with *Sal*
Ammoniack each two Drachms,
Tincture of Saffron one Drachm
and an half, Oxy-mel of Squills six
Drachms. Mix, and take it by
Spoonfuls. Or,

R 3

Take

Take of Tincture of Gum Ammoniac, Sulphur each two Drachms. Mix them. Give ten Grains or more at once.

He also highly values Syrup of Elecampane described by *Horatius Augenus*, which I shall here set down;

Take of Root of Elecampane, Polypody each two Ounces, Currans one Drachm and an half, *Sebestan*, Coltsfoot, Lungwort, Savory, Calamint, each one handful, one Leaf of Tabaco, scraped Liquorice two Drachms, Seed of Nettles, Cotton each half a Drachm. Boyl them in small Mead to a pint and an half, and with as much Sugar make a Syrup. Give a Spoonful of it Morning and Evening in form of a *Linctus*, or mixt with other things. Or,

Take of powder of Crabs Eyes one Drachm and an half, volatil Salt of Amber half a Scruple, *species diureos simplex* two Drachms, *Sperma Ceti* half a Drachm. Mix them. Make a powder for several times taking in Broth or some other proper Vehicle.

Beside the things aforesaid he questions not, but Purging, Bleeding and Blisters raised on the inside of the Arms near the Armpits sometimes do good.

§. 18.

Solbius advises first of all to remove the Obstruction, if there be any, in the Nose, Jaws, and Larynx; and then to Cure the Shortness of Breath (which is caused by the heat and rarefaction of

the Blood) by Bleeding and temperate Acids, as Salt Nitre, *pis Prunella*, &c. So the heat of the *aspera arteria* will be removing the cause of the Shortness, whether it be any vicium, Aposten, grumous Pus, or thick Pus, which causes it. Therefore all inciding Medicines are good, for which end he also Vomits: But he excepts the Spitting of Blood, in which a Vomiting is always dangerous. He will also the difficulty of Breathing, if it is from Vapors produced by Bile and Bile in the *intestinum tenuius*, cured by amending the viscidity and evacuating it, and also by directing or evacuating the Bile, if it abound, here is a receipt of the Authors.

Take of Gum Ammoniac in Vinegar half a Drachm, Mastich one Scruple, Turpentine of *Albandal*, resin of *Sassafras* each twenty five Grains, Salt of Amber five Grains, Oil of Myrrh two drops. Mix them. Make thirty Pills. Let the Patient take five or six in the Morning fasting, and drink some Broth an hour after. Or,

Take of root of Elecampane one Ounce, Galangal two Drachms, Polypody of the Oak half an Ounce, leaves of *carduus marianus*, Lungwort, lesser *Cassia*, white Horehound, *Splachum* each one handful. Leaves of *na* one Ounce and an half, chiffoes of Agarick one Drachm and an half, black Hellebore a Drachm, Aniseeds, *millepedes* two Drachms, Tartar half an Ounce, one Drachm and an half for a Bag. Put it into three parts of Wine.

Carminatives, Diaphoreticks, Aromatics, Bechicks, &c. are According to him, if phlegm come from the head on the Lungs, to evacuate the Phlegm that gathered, he advises Aromatics Phlegmagogues, also Eructives and Masticatories, whereby may evacuate thick Phlegm by Mouth and Nostrils.

§. 19.

And his Followers commend all such things as remove obstructions of the Vessels and which regulate the difficult Motion of the animal Spirit. Among which things, Aromatick and volatily things do excell for by the volatility that is in them, they are able to remove the dirt and obstruction of the vessels. They prefer *tinctura bezarum*, *aqua theriacalis camphorata*, *volatile oleum Sylvii*, *diaphoreticum Cranii*, and all manner of volatile Salts: for instance;

One Ounce of Water of Cinnamon one Ounce, *aqua asthmatica*, *lobosum* each six Drachms. *elixir* *essentiale* one Drachm, Essence of Elemcampane half a Drachm, volatile Spirit of sal Ammoniac twenty drops, Syrup of Hedge-mustard one Ounce. Mix them.

According to their Indication, decoctions of the Woods will be proper, which consist of hard Partes. In the fit they extol *Spermaceti* given from a Scruple to a Drachm in some warm Beer or Wine. If this Disease arise from cold, it may be cured by evacuating the cold Matter. Concerning

which see the next Chapter of an *Empyema*.

§. 20.

Since we have seen other Mens Opinions, we must now give our own. We therefore endeavour, 1. In the Fit to ease the difficulty of breathing and to free the Patient from present danger of death. 2. To find out and extirpate the morbidick cause, as far as we are able, that the Fit may not return. The first we call Curatory; the latter Preservatory. And since this intercepted Motion of Breathing does often sieze scorbutick and hypochondriack Persons, we must therefore have regard to the Scurvy and Melancholy. We therefore, with *Willis* and *Helmont*, make a two fold *Asthma*; a moist or serous, and a dry or convulsive. Now lest the Heart should be stifled by a serous *Asthma*, whether it come from an ebullition of scorbutick serum, or from a sudden coagulation of grumescient Blood in the narrow Passages of the Lungs, or in the Heart, presently Medicines must be given, which attenuate and restore the circulation to the Blood, when for thickness it stagnates in the narrow Passages of the Lungs, (whether it be caused by an Acid, or a fixt Salt, or poysonous *Mercury*.) In this case therefore we bleed without delay: for when the quantity is lessened what remains may the more easily pass the pneumonick Vessels; and so a liberty of breathing will be restored. To dissolve these coagulations of Blood, generally caused by an Acid, all volatile, aromatick, oily, spirituous, balsamick volatile, cutting, precipitating things, &c. are good. I

This moist Asthma have its rise from a viscid mucilage lodged in the bronchia of the Lungs, and in the Stomach, all hot Thoracicks mixt with Antiscorbuticks are proper, such as are all spirituous, balsamick, volatil, cutting things, and such as correct Acidity. Among which we have observed these to be particularly good, Spirit of Gum Ammoniack, made with Sal Ammoniack, volatil Salt of Amber, Harts-horn, Soot, Mans-Blood, Sows, Ants, *balsamus sulphuris anisatus*, & *spiritus asthmaticus Michaelis*, which is made of Nitre, Sulphur, Gum Ammoniack, &c. Some in this case use volatil oyl Salts. Here follows *sal volatile oleosum nostrum*;

Take of Tincture of Sulphur one pound, Salt of Tartar half a pound. Let them stand together on a Tile several hours, till the Mass be heaved up no more, but sink and look of a liver Colour, then pour the Mass upon a wet Board, and powder it. Pour upon it a measure and an half of Spirit of generous Wine. When it has stood a Night, and the Tincture looks high coloured, add of red Myrrh one Ounce and an half, root of Angelica two Ounces, Saffron half an Ounce, Treacle four Ounces, Mummy three Drachms, Cinnamon one Ounce, Camphore two Drachms, volatil Salt of Harts-horn half an Ounce, Oyl of Amber, Aniseed each five Drachms. Let them stand mixt for a time in a Vessel well stopp'd, then decant it. The Dose is from five drops to ten and more.

Here are other Receipts for a moist Asthma;

Take of *aqua asthmatica*, num each one Ounce and Spirit of Gum Ammoniack Drachm, volatil Salt of *sal volatile oleosum nostrum* each half a Scruple, of Elecampane one Scruple of Cinnamon one Mix them, for several times

The following mixture of Illustrious Prince of asthma successfully.

Take of *aqua asthmatica* one Water of Hyssop one Ounce an half, Coltsfoot, Ladies each two Ounces, Syrup drawn from the Juice one Syrup of Jujubs one Ounce *stur. propr.* three Drachms them.

For we must observe in a *ma* always to change and Medicines, as *Septalius* p. 149. has taken notice. It is a Disease, that cannot be violently and on a sudden, continual and frequent taking the obstructions ly in the of the respiratory Nerves, these Tubes are very narrow open slowly; and the Lungs a tender Part, and cannot much violence. Here follows receipt;

Take of *Sperma ceti* one Drachm, Flowers of benzoin half a Drachm, Myrrh, volatil Salt of Amber half a Scruple. Mix them four Doses. Or,

Take of *millepedes* Wine four Ounces, Syrup of Horehound, each two Ounces, Essence of campane three Drachms them.

But if an Asthma come from stuff of the Lungs with a thick, and Matter, this following will be proper for nice People, giving either a vomit or Purge first.

Take of Juice of Radish, Hedge-mustard, Tabaco each half an Ounce, extract of Saffron half a Drachm, Water of Mint, Hyssop each one Ounce. Mix and give by spoonfuls.

This of Brunnerus is a good asthma-tick Potion;

Take of Gum-Ammoniack half a Scruple, Water of Hyssop four Ounces, white Rhenish Wine three Ounces. Dissolve them over the fire according to Art. Add of Syrup of Marsh-mallows half an Ounce. Mix them.

This mixture, which was much used by the late Prince of Orange, is worth the observation;

Take of aqua carbanculi two Ounces, mel scilliticum one Ounce. Mix them. Take a spoonful at a time.

That follows of Helfricus in his Medicus presenti tem-poribus accommodandus will be excellent in an Asthma, that comes from a stringent acid;

Take of aqua carminativa Dorneri,onica essentificata each one Ounce and an half, asthmatica one Ounce, Essence of St. John's-wort one Drachm, volatil Salt of Man's Blood half a Drachm, Rue one Drachm, theriaca celestis three Grains, confectio alkermetis half a Drachm, Syrup of red

Poppy what is sufficient. Mix them. Or,

Take of aqua asthmatica Rudolphi two Ounces, Water of Rape Flowers one Ounce and an half, Oxymel of Squills two Ounces, Spirit of Gum Ammoniack with Vitriol one Drachm. Mix them.

Difficulty of breathing, which continually afflicts hypochondriack and scorbutick Persons, and depends upon an over crude and viscidus and a dispirited Blood or Chyle, will be cured when the original Disease is cured: regard therefore must be had to it. The case is the same, if this Disease proceed from excessive fatness or corpulence, as I have often observed: for when the corpulence is abated the Asthma ceases, in which case we may very well use Vinegar of Squills. We observe the same in Women with Child, and such as are troubled with Tympanies and Wind, when they are well of the principal Disease, the Asthma's cured. If it came from the Bellies being full of Wind, and thereby pressing the Diaphragm, it will easily be cured by carminative Clysters, and by taking carminative things inwardly. Here is a receipt;

Take of Water of Mint, Zedoary each one Ounce and an half, Spirit of Citron Rind, bals. embryon. each half an Ounce. Mix, and give it by spoonfuls.

In this case also these things are proper; spiritus carminativus Sylvii, essentia carminativa wedelii, described in his Opiologia, anticolicum Michaelis, spiritus nitri dulcis, &c. Sometimes a great load of viscid Phlegm

Phlegm lies in the Stomach, oftentimes attended by inflation of the Stomach and Guts, Spasms of the nervous Fibres, and by consequent an *Asthma*; which viscous Matter must be dislodged by a Vomit, whereby *Timæus l. 3. c. 13.* when he had tried other things to no purpose, cured an old Man, giving him *aqua benedicta Rulandi* at times, which voided a great quantity of Phlegm upwards and downwards. In a præcordial *Asthma* I never found a better Medicine than Vomits carefully given: for the violent Constriction shakes out that which is got into the Nerves. Which appears from *Primrose de morb. pueror.* who presently cured Children of an *Asthma* by voiding this viscid Phlegm, which is usually lodged in the Stomach. Instead of Vomits, we give nice People Gum Ammoniac with a little Resin of Jalap. We also apply hot bags of paregorick and carminative Herbs boiled in Wine, to a windy Stomach; or *Emplastrum ex ladano Crætonis*, or *carminativum Sylvii* to a weak Stomach, or our stomachick mixture of Chocolate, Balsam of Cinnamon, Oyl of Nutmeg and Sack. Essence of Elecampane given in drink is admirable good; some commend Essence of Wormwood.

These things we have hitherto mentioned, are good for a moist *Asthma*; now we will briefly see what will be good for a dry or convulsive *Asthma*, or an Epilepsie of the Lungs. In which case Patients are miserable; partly because they are ill handled by unskilful Physicians; partly by reason the cause often lies in the very animal Spirits, which should flow to the Muscles of the Breast, but do not, and so the Breast can neither heave nor

fall. Here therefore all things are proper, which the coagulating acid Particles fight with the secret alkaline and cause shortness of Breath are Antispasmodicks, Antiticks, Balsamicks, and Medicines endued with sulphureous, fixtil Particles; or volatil Acid rectify a crude Acid, relieve Spirits, and cherish the nerves. These excel, *Sperma millepedes*, Earth-worms, that live in Horse-dung, which divers volatil Salts, and Oyls may be made, very proper for this use. Here are

Take of Spirit of Worms, each one Drachm and *Sperma ceti* dissolved one Essence of Saffron half a Mix them. Make an Essence fifteen drops.

Or rather the following leptic. For *Helmont* holds whatever cures an epileptic cure an asthmatick Person;

Take of Amber prepared, hoof prepared, native each half a Drachm prepared one Scruple, Cast a Scruple. Mix them. Powder for three Doses given in a proper Vehicle ly, Linden-tree-Water.

All Cephalicks and Nerve also good here; especially made of Castor and Cinnamon, Soot, Sal Ammoniac, horn, Sage, Rosemary, Castor, Saffron. *specificum Michaelis*, volatil Sale of Man's skull, Horn of an Elephant, &c. Also for correction

or acid Acrimony, which irritates the nervous kind, Precipitants and Absorbents mixt with the Acid Antispasmodicks are good: for instance;

of Crabs-eyes prepared half Drachm, oriental Bezoar three Grains, *Sperma ceti*, prepared in Oil of Olive each half a Scruple. Mix them. Make a Powder.

A Fit also of this convulsive Asthma we have often with admirable success observed desired success from the use of Opiates, that is, a few Drops of *laudanum opiatum* dissolved in convenient Water and given by spoonfuls. If half a Drachm of *Sperma ceti* with a little *laudanum* be added to *Brunnerus* his Powder often proves effectual. When Asthma comes from an Itch or driven in, volatil Diaphoretic will be good to drive out again. But if there be heat and inflammation of Humors (as in Fevers) more fixt and temperate Remedies, which precipitate what is too thick to the urinary Passages, are proper, such as Crabs-eyes, *Antonium diaphoreticum*, &c. Then

Nervines and Paregoricks may be outwardly applied to the Breast and Diaphragm, such as Oyl of Chamomile, Castor, Amber, Lavender, Ointment of Marsh-Mallows, divers Greases and Cataplasms made of roasted Onions: for instance;

Take of mucilage of Marsh-mallow, Linseed, Fenugreek drawn with Hyssop-Water one Ounce, Powder of Florentine *Iris* one Drachm and an half, Gum Ammoniac dissolved in Elecampane Wine two Drachms. With a sufficient quantity of Oyl of *Iris*, sweet Almonds and Wax make a Liniment.

The Breast may be anointed with spirituous, castorine Medicines, volatil Salts, &c. I have often burnt the Breast with *Moxa*, and had good success. Our *Moxa* made of Mugwort, is as good as that which comes from the *East-Indies*. We do not wholly neglect Scarifying, Bleeding, Blistering, Cupping, Friction, Pouring cold Water on, and several other things. For according to the Poet,

A cane non magno saepe tenetur aper.

CHAP. III.

Of a Pleurisy and Peripneumony, or Inflammation of the Lungs.

§. I.

BEfore we proceed, we must tell you, that we, as well as *Ballonius*, do comprehend these two Diseases under one name of *Pleuripneumony* or *Pneumopleurisy*; so that as it participates more of the nature of the one Disease than the other, it may be denominated accordingly. An Inflammation of the Lungs is called a *Peripneumony*, of the *Pleura* a *Pleurisy*: inasmuch as the Blood in its Fermentation discharges its viscous refuse, sometimes on the one part, sometimes on the other. *Helmont* aimed at as much in his *Tract de pleura furent.* p. 247. v. 27. where he says, that a *Pleurisy* differs from a *Peripneumony* neither in occasional Causes nor Remedies. Since therefore the *Idea* of them is one and the same, their explication should be the same: for they differ only in place. We therefore describe a *Pleuripneumony*, to be an *Inflammation of the Lungs on one or both*

sides, or of the Pleura, joined with a great difficulty of Breathing, a Fever, a violent Cough, dry, sometimes with frothy Sputa, and frequently Bloody, with Pain in the Breast and about the Lungs, depending generally upon the Pleura, the Blood, which being stopp'd in its Motion, stagnates, at length evades its Course, and vellicates the Fibres of the Pleura. This is also a *Phlegmatick Pleurisy*, which sort I saw several times. From the Definition it is evident, that every pain in the Lungs may not be called a *Pleuripneumony*, but only that which is an acute Disease, and is attended with the afore said Symptoms, if the Inflammation lie in the Pleura, Muscles, or if a violent Pain be caused there by Wind, it is a bastard Disease; because there is no Fever nor Spitting of Blood, the pain indeed is felt in the Lungs, the Breast, which is in some measure exasperated by touching it is not so stable, but abates by applying things that dissipate the Air. And because precepts treat

pleas delight; I will therefore
you a Case.

A Case.

A young Man of a Sanguineo-
meric Complexion, being in
d health, and given to feed
rily, and walk much (till then,
out any inconvenience) walk-
out in the Month of March, in a
Air, comes home weary, and
ks a good draught of cold
to quench his Thirst, and re-
him. He was taken with a
ering all his Body over; he
to sleep, wakes four hours af-
and feels an obscure pain un-
his left Pap, shooting towards
Hypochondrium. The next day
pain encreased and became
ing, a Cough and Fever afflict-
him; at length he spit blood
a great decay of Strength
violent thirst; all which are
of a Pneumopleurisy.

§.2. Part affected.

As to the part affected, Phy-
sicians generally place a Perip-
ny in the Lungs, and a Pleu-
in the Membrane, *Pleura*; yet
deny, that the Lungs are a
affected, because they are
insensible. *Diocles* holds,
the Veins of the Lungs are
affected. *Crasistratus*, the
ries. *Asclepiades*, the Bron-
of the Lungs. *Soranus*, the
cographer, the whole Body;
he holds, that the Lungs are
worst. We undoubtedly hold,
in this Case the Lungs, and
specially their Membranes (for a
king pain can be ascribed only
Membranes) that cloath both
Ribs and Lungs, to wit, some-

times only the *Pleura*, sometimes
both the Membranes and Lungs
are affected and inflamed; for the
substance of the Lungs is very sub-
ject to Inflammation, because it is
soft, spongy, rare and porous;
wherefore the Pores may easily be
obstructed, and erysipelaceous In-
flamations may ensue, whence ei-
ther a Pleuripneumony or a Pneu-
mopleurisy arises. *Hippocrates*
is of our judgement, who in sever-
al places, but especially *de loc. in*
homine, text. 24. says expressly, that
in a Peripneumony both sides are
affected, but in a Pleurisy only one
is hurt. Nor does *Demetrius Hero-*
philus differ from the said opinion,
when he says *lib. 12. de passime*,
that a Peripneumony is a swelling
in the whole Body of the Lungs,
and a Pleurisy only in part of
them. *Bonetus* in *Anatomia pract.*
1. Platerus, Celsus and others prove
it by dissections of dead Bodies, in
which, they say, they do not al-
ways find the *Membrana costas suc-*
cingentes inflamed, but the Lungs
and their Membrane torn and cor-
roded. We do not question also
but there may be one about the
intercostal Muscles. For we saw a
young Man, who under his left Arm,
about the intercostal Muscles, void-
ed at times four pounds of puru-
lent and serous, coagulated matter,
whom we cured, and he is now
living and in health. For that of
Hippocrates is most certainly true
Seft. 5. aph. 8. Whoever are taken
with a Pleurisy, and spit not well in
fourteen days, they turn to suppura-
tion.

§. 3.

NOW we have seen the part affected in this Disease, we must go to the Diagnostick. Which gives us such Signs as show the Disease and its Causes; or distinguish this Disease from all others. This Disease is shown sometimes by a pricking pain, sometimes a dull one, sometimes accompanied with heat, and often encreased and exasperated by continual breathing: for the sudden encrease of pain causes Inflammation, therefore the place cannot endure to be touched. For if you press directly upon the intercostal Muscles, and irritate the Nervous Fibres, the pain is intolerable; because the evasated Blood every hour acquires greater acrimony, whereby the Membranes are inflamed and vellicated, whence flows that exquisite pain. And a dull pain arises, when the Inflammation is in the fleshy substance of the Muscle, which because of its Nervous Fibres is in some measure sensible; yet so as to be in a far less degree than the former, and this pain also shoots sometimes to the *Hypochondrium*, sometimes to the Collar Bone. Sometimes it throbs and swells, that is, because the Muscles are Inflamed, and while it turns to suppuration, as in our foresaid Patient. There is a continual encreasing Fever in these Diseases, undoubtedly from the troubled mixture of the Blood, especially when *pus* comes on, which Fever has a fit every other day, especially towards Evening; because at that time when the Sun goes down, the Pores of the Skin are shut, and transpiration being thereby hin-

dred, the effervescence of the Blood is greater, and by consequence the mixture of it more troubled. It is affected chiefly by sharp or bilious particles lodged in the mass of Blood. There is difficulty of Breathing because the Breast cannot easily be dilated, when the motion is interrupted; whence the force must needs be weaker. And such respiration is not sufficient to temper the effervescence of the Blood. Smallness must be made up by frequency; therefore the Pulse is frequent and quick. The Heat in this Disease is soft, great, and unequal, intermittent, repeated, beating double. The Cough is exceeding violent, inasmuch as evasated Blood being so sharp is able insensibly to relax the Lungs; but at the first it is not in that quantity in the Lungs, that any great quantity can be spit up, because the viscidulous matter is so interwoven into the Lungs, that it cannot come at the Bronchia. Therefore, it is impossible, it be coughed up: yet Blood is spit up in a Pneumopleurisy, the Blood being grown so thick it passes the open Pores of the Lungs; and as the affluxion is greater or less, so more or less Blood is voided. In this also Spittle of divers colours is raised; at first it is red and bloody; when it comes to be purulent, it is bad. If blood be spit, it is bad. I have seen *Pus* raised, without the coming of Blood first. The Colour is red, because sharp Particles of Blood are sent thither. The Lungs troubled with unequal heat, because sharp Particles are

...es them dry, and by conse-
...nt such Patients must love moist-
...g things. They generally ly on
...r backs, or sit up.

§. 4. Cause.

These things premised, we will
proceed to the Causes. And
according to the Ancients the im-
mediate cause of this Disease is an
inflammation of the *Pleura* in the
Pleurisy, and of the Lungs in the
Pneumony. Their mediate
cause is Blood, flowing out of the
cava, through the *vena sine pa-*
...to the small Veins of the Ribs,
...the Membranes; as one may
conclude from the red Spittle,
...ng-time, Youth, and Manner of
...g, which breeds much Blood:
...times it is Phlegm, and then
Disease is of longer continuance,
Spittle is frothy and white, the
Disease happens in Winter-time,
constitution of the Air and
...is cold, and the course of
...breeds phlegmatick Blood.
...say a Pleurisy differs from
Pneumony, because the former
...from a subtil, bilious and
...ly Cause; and the latter pro-
...generally from a thick and
...matick Matter, running by the
...s and Arteries into the sub-
...e of the Lungs.

§. 5.

The next thing is to see what
the Chymists say. And they
...the Cause of these Diseases, an
...ine Salt, which is of an arseni-
...and orpimental property, by its
...mony easily corroding the
...l-Vessels and Membranes, and
...le to cause a Pleurisy. Hence
...earnestly contend, That these

Diseases have their rise from a ta-
...taceous and mucilaginous oppilati-
...on. Paracelsus speaks something
of this, but obscurely, c. 4. *tract.*
1. *de morb. metall.* where he says, a
pulmonia, and resin is bred of the
Chaos, in which the Star and Mine
of Orpiment is decocted. But these
things are so obscure, that we shall
not waste any more time in
them.

§. 6.

Helmont in the rage of the *Pleu-*
...ia considers, first the internal
mover or spur, and then the dila-
cerator of the *Pleura*. He considers
it as Blood running thither, and as
an Apostem arising from thence;
and he brings an example of a place
prickt with a Thorn. In his Opi-
nion, therefore, the cause of a Pleu-
risy is a foreign Acidity, conceived
in the *Archæus*, which is driven into
the *vena azygus*, yea and into the
adjoining flesh of the Ribs, and
thereby a morbid Product, an Apo-
stem, is created. For an acid
Blood sometimes coagulates, contra-
ry to the nature of the Veins and
Flesh. He proves, That there is
something of an acid in a Pleurisy;
by this reason, namely, that in a
Pleurisy the Urine and Blood turn
thick as they come out, which
grumescence and curdling is an ar-
gument of acidity. When this a-
cid juice falls upon the intercostal
Flesh, it causes a Pleuritick pain:
but when it is dispersed by the in-
fected *Archæus* into the *Vena Arte-*
riosa or the *Arteria Venosa*, it causes
a Peripneumony. He is convinced
by his own experience, that this
Disease does sometimes reside in
the Lungs.

§. 7.

§. 7.

THe famous *Willis* makes the the proximate cause of a Pleurisy to be bad Blood, by reason of its viscosity detained or extravasated in the lesser Vessels of the Membrane, called *Pleura*; and in a Peripneumony, in the greater pneumonick Vessels. Which being gathered there in abundance, causes an Inflammation. He derives the pricking and sharp Pain from the solution of continuiry in a membranous and very sensible Part; difficulty of breathing, from the hurt of the muscular Fibres; and the Fever, from the excessive Effervescence of the Blood. Among the more remote Causes he reckons all such things as make the Blood to grow clammy and effervescent, and cause a febrile turgescence. Therefore sudden alterations of Heat and Cold may cause a pleuripneumony, and so may high drinking, and immoderate Exercise, inasmuch as these things disturb the Blood and encrease its Effervescence.

§. 8.

Sylvius, as most do, makes the immediate cause of these Diseases to be an Inflammation of the *Pleura* in a Pleurisy, and of the Lungs in a Peripneumony. And he holds, That the Blood is inflamed, when it runs out of its Vessels, and afterwards stagnates and coagulates: Whereupon the volatil and subtil Particles vanish, that used to temper the acid and saline ones, and so both growing sharper, struggle the more violently one against another; and because of the oily Parts in the Blood they cause a hot

effervescence, and by degrees corrupt the Blood, that it turns into Pus of divers colours; sometimes black, sometimes yellow, sometimes tinged with Blood, according to the variety of the corruption. But you may find more of our own Opinion: therefore I shall avoid repetitions.

§. 9.

THE Cartesians derive the cause from a Matter that ascends, pricks and corrodes the *Pleura* or Lungs; which Matter is nothing else but the sharp, and Particles of the Blood, that are extravasated. For if the Blood is over-much moved by remotion, it is easily evaporated, and the great Waves force the Water out of the Banks: violent Motion produces these Diseases; and an immoderate Exercise of the Body, Riding, Dancing, Playing at Ball, &c. Sometimes the Blood is made too viscid, and of too rare a nature, and so is more fluid and runs easier through the Body; and the bilious, sharp and volatile Particles have got into the small Vessels, and by their Acrimony corrode them, or by their violence burst them, they grow sharp, being carried into the *Pleura* or Lungs, their figures do not pass with the Pores of the Parts, they stop, and cause one of these Diseases; sometimes a flux of these vitious Particles, that pass into the intercostal Muscles, then a difficulty of breathing, a desire to Cough, arise, and the nervous Fibres of the *bronchia* are irritated by the said Particles. They also

also to the subtil Matter, act-
upon these irregular Particles,
causing Heat and Cold. For
an argument, that the efferve-
scence may be encreased by Pus or
altered Blood, because it is so
ounds or Swellings, when they
to suppuration, though the
be far from the Heart.

§. 10.

It now we will give you our
Opinion. And for bet-
illustration of the Matter, we
premise something concerning
Blood. Now this fountain of
contained in its Vessels, name-
Veins, Arteries and Muscular
; it also consists of its Ele-
ments, as every one knows, which
they amicably concur one
another, and while the Blood
circulates aright in the foresaid
Parts, the Body is kept in its vi-
tal heat, because of the exact commix-
tion and agglutination of this vital
Blood for the nourishing of the
Body. But whereever the Blood is
stagnant in our Body, or stops, there it
becomes into a sower Ferment. As
the well constituted Blood
remains within its Vessels, so
the salutary Actions of our
Body last, the true signs of Health;
but if the Blood, by Solution of
cohesion, get out of its Vessels,
these pectoral Tragedies are
produced.

Nor do we here blame only
the effusion and evasation of the
Blood into the afore said Parts, but
also an over fluid and sharp
Humors, For there are no Humors,
when they are evasated in a-
ir, but will, if they tarry there
acquire an Acidity; because
they have then lost their Spirits. If
therefore these acid Particles, strug-

ling with the sulphureous, and so
causing an effervescence, predominate
about the Lungs, they cause a peri-
pneumony, and hence comes some-
times an Apostem and an Ulcer:
If about the *Pleura* and Muscles of
the Breast, they cause a Pleurisy.
We hold, That the Thorn in the
Membranes, is in these Diseases, an
inept acidity of the Blood, ferment-
ing with its volatill Salt, and dispo-
sing to a grumescence, and so some
Vessel being obstructed, there fol-
lows a stagnation, coagulation and
inflammation. Therefore we say,
That these concatenated Diseases
are nothing else, but a præternatu-
ral fermentation of the Blood,
poured out of its Receptacles; in
which fermentation the sharp Par-
ticles do by their Points vellicate
the membranaceous Parts, and be-
ing intimately fixt in the nervous
Fibres, they make a concussion
therein, which because it is conti-
nued to the origination of the
Nerves, a sad Sensation cannot chuse
but arise, which we call *Pain*. And
it is various, pungent, rending,
throbbing, dull, distending or cor-
roding, &c. according to the Na-
ture of the Part affected, its man-
ner of being affected, and the Quali-
ty of the Spirits and concurrent
Particles of the Blood. And so
much for the immediate Cause.

And as for the remote Causes
they are several. I have often seen
these Diseases caused by hindrance
of insensible transpiration: there-
fore a bad Air is generally the oc-
casion of this Disease. Violent ex-
ercises are also Causes, inasmuch as
they put the Blood into an over
high Ferment, whereupon it is car-
ried impetuously through the Arte-
ries and Veins, and therefore may
easily run out of its Vessels, espe-

cially if it be suddenly stopt in its Motion; for then the Vessels are too far distended, and therefore are easily burst. Thus we see, That by drinking cold Drink, while the the Body is hot, the Blood is apt to coagulate and stop in its Motion. All things may be Causes, which are apt to coagulate the Blood, especially in these small Vessels which are found in the intercostal Muscles, and the *Pleura* and pneumonick Vessels: for a little grumous Blood is able to stop these small Vessels; which when done, stagnation and distension follow, then a breach and inflammation. This is confirmed by our own experience in opening one that died of a Pleurisy, in whom we found above two Ounces of Blood in the Membrane *Pleura*, preternaturally thick and grumous. See *Boner's practical Anatomy*, *Ettmuller*, and other experienced Persons, who maintain what we say, by their Authority and Reason.

§. II. Prognostick.

HAVING considered the Etiology, we will now go to the Prognostick. That of *Hippocrates* is most certainly true, *Whoever, being sick of a Pleurisy, are not purged by Spittle in fourteen days, they turn to suppuration*; and suppuration is nothing else, but the turning of an inflamed Tumor into a purulent Ulcer, when the Acid, upon the deservescence of the Matter, begins to abound, the volatil and spirituous Particles flying away, and heterogeneous ones coming in their stead. A Pleurisy is generally held to be destructive to old Men, Women, and such as have had it twice or thrice before. A Pleurisy in which nothing, or but little is raised by spitting, or when

spitting quite ceases, Pain remains, is dangerous, all bloody or all yellow is a sign, and so is black; for it is a total corruption, being of the Acid, of a corruption and threatening a Gangrene all Spittle, the more exact the Humors mixt, and unguishable one from another, worse it is, by the consent of Authors. A small, hard and ferratil Pulse is death; for no pleurisy who had such a Pulse, cured, when all things were bad; otherwise we not despair, as I have by frequent observation. Guttles also is bad, and so a dry, and a little round Spittle of the same sort. But must always be considered compared with the Disease that complain of a great and straitness in this Disease: so are they, when the Nals are cold, and the Pulse hot; and when noble Pulse will do no good, it is a Malignant Pleurisy, and mortal. See *Epibem*, *G* 1. obs. 15. When a Cough or a Hiccough comes, it is bad and so does a looseness at the Nose. But other rise terminates, in a like other acute Diseases, the seventh, sometimes the seventh or fourteenth day, exceed this time it turns to *ma*, a Consumption, or under the Arm, as I have served. And they that are ed in forty days, grow destructive. Sometimes the matter is received into the Pleura as it came by Fluxion,

diffused into the remaining
of Blood, and ends sometimes
the Hemorrhoids, sometimes in
Menfes, sometimes in a purulent
of the Belly, and sometimes
rine; concerning which there
cant a most elegant Epistle of
inus, published with *Wedelius*
Scholium in the *German epheme-*
ann. 3. We have observed the
terminations. The *metastasis*
the Blood is most frequent,
it turns to Pus, and is void-
expectoration. There are
s, if Spittle be raised in the
ning; and if it be of a lauda-
colour and consistence. If the
Cough, and difficulty of Breath-
bate, if the Pulse grow less
and every day greater, they
ood signs. But since *Hippocra-*
temnerius and others are copious
his Subject, I shall forbear to
ore, lest I might be twitted
that of *Juvenal*;

*in quacunq; sedens modo legerat,
eac eadem stans
feret, atque eadem cantabit ver-
ibus iisdem:
dit miseros crambe repetita ma-
stros.*

12. Dietetick Cure.

ese things considered, we
ill proceed to the Cure, and
to the Dietetick. The Air
ore must be temperate, or
enclining to heat. A cold Air
very bad in this case: be-
sends its acid pointed Par-
through the Pores of the Bo-
which then associating them-
to the Blood coagulate it:
en the Air is entred, it shuts
ops the Circulation of
ood, and obstructs the lesser

Blood-Vessels, whereupon the vola-
til Spirits fly into Air, and the
rest that remain fight one with a-
nother, coagulate and turn to Pus.
Whence it follows, That a North
and East Air is very hurtful, because
such an Air is a sworn enemy to
the Membranes, and to all nervous
Parts, according to that of *Hippo-*
crates, *cold things are enemies to the*
Breast. Sudden alterations of the
Air, either from excessive heat to
cold, or from violent cold to heat,
may easily cause a Pleurisy. If the
Air be infected, epidemical Pleuri-
sies proceed from thence; whence
it further follows, That the contra-
gion has no fixt place in the Body.
The strange force of this Infection
is admirably set out by *Sylvius* in o-
ratione de Aere epidemico, by *Hoge-*
landus, *Etmullerus* in *disputatione de*
parvis mag. morb. principiis, *Ten Rhyne*
de vet. med. and others.

The Meat must be light and thin,
such as Chicken-broth, Barly-cream,
and Oatmeal gruel. On the con-
trary, all salt, sharp, sowre, bitter
and aromatised things must be for-
born. All Pulse is hurtful; and len-
tils are held by *Galen* and *Rhasis* to
be specifically bad. Cold Meats
also, are very bad, such as Mush-
romes, Cucumbers, Melons. Salads
also and all Garden-fare are bad.
For *Polybius* tells, how *Agron* King
of Hungary, feeding too freely on
such Cates, fell into a Pleurisy,
which in a few days carried him
off, *l. 2. hist.* The Drink must be
some convenient Decoction made
of root of Liquorice, *scorzonera*,
Flowers of Poppy, and other pecto-
ral things; or for the rustick Tribe,
of Horse-dung, according to *Hel-*
mont's Experiment, because much
alkali, which is good to imbibe the
pleuritick Acid, is contained in

the Dung. Or an emulsion made of Almonds and the cold Seeds with water of Cichory, Borrage and red Poppy, &c. may be drunk for some days to allay the heat in the Breast. No Wine must be drunk, till the heat abate. *Hippocrates* and *Celsus* do allow a little of small White Wine; but upon my own experience it is best to let it alone: for by humoring our Patients we injure both them and our selves. *Brassavolus comment. in l. 1. Hipp. de ratione vi&st. acut. l. 22.* says, That Wine in a Pleurisy is present Poyson, especially in the beginning. So cold drink is hurtful. *Hildanus* has an instance of a Pleurisy in both Sides, which came by drinking cold drink, *cent. 4. obs. 25.* *Helmont* is of the same opinion.

Best both of Body and Mind is good here: on the contrary too much Motion, because it moves the Blood too much, must be forborn. Swimming is very hurtful, concerning which see *Curtius* his History of *Alexander the Great*, c. 5.

Immoderate *waking* is as bad, partly by detaining the Humors, that should be dissipated (as *Hippocrates* s. 7. aph. 71. says) and partly by dissipating the Humors, that should be detained.

The *Passions of the mind* must be moderate, Anger must be forborn; for it is the greatest plague of a Man's Life, and is very dangerous to the Heart, as it does the highest violence to the mass of Blood. Grief, Care, and Fear, have all of them, as experience testifies, been the cause of this Disease.

As to the excreta and retenta,

they must be correspondant to the nature or Art: for such are naturally loose in their Bodies, and subject to a Pleurisy, and on the contrary. Therefore a fluid must be had every day, according to *Hippocrates lib. de Art. Loc.* But when there is a Pleurisy, it is better to be loose; since, in *Hippocrates* judgment, as in all Inflammations, so in a Pleurisy (which is of a violent nature) purging is hurtful. Retention of usual evacuations of the Hemorrhoids, Melancholia, and Fistulae is hurtful, coming from on high, and being too heavy a burden, may give them occasion it.

§. 13. Pharmacopoeia Cure.

WE will now take up the Pharmacopoeia, and first see, what medicines are used in a Pleurisy. They first of all, lest the Patient should get ground, give him a little Wine, and when that is come, let Blood in the Basilica Vein of the Arm on that side till the Blood change; then lay on cupping-glasses to the Chest, and by Ligatures, and Suppositories, endeavour to divert the humors running to the part affected. If a viscid and bilious humor presses the Body, or if it be already got into the part, they evacuate it (otherwise they forbear) by some gentle Evacuators, as *Prunum laxativum*, *Manna*, *Rick*, and *Rhubarb*, &c.

with other Pectorals. Then make the matter, which ou-
to the Lungs, or is already
d there, obedient by things
ar to the Breast, and which
ore spittle, Syrup of Jujubs,
rice, Violets, Maiden-hair,
p, Sugar Candy, *Diapenidium*,
r *Diaireos*, *Diatragacanthum*
um, *Loboch de pino*, *Loboch*
of *expertum*, a decocti-
f Figs, Barly, Liquorice,
Almonds, &c. Here is a
pt out of their Dispensato-

monds and white Lilies. They
foment the part affected with a
Decoction of Hyssop, and anoint
the whole Breast with oyl of Li-
lies, Chamomil, and powder of
Iris, and Saffron. They likewise
commend the Broth of an old Ca-
pon boyled with Hyssop and Mai-
den-hair. Then they give heal-
ing things, and they prefer Goats
milk above all others. In a ba-
stard Pleurisy they order such things
as gently resolve;

Take of flowers of Chamomil, Me-
lilot, Leaves of Rue, Dill, Violet,
Mallow each one handful. Cut
them and put them in a bag,
boyl it in milk and apply it to
the pained side; and let it be
often repeated.

They also use a bag of Salt, Mil-
let, Bran, Aniseseed, and Caraways,
if the matter be windy. In a Peri-
pneumony they use the same Cure
as in a Pleurisy; only they apply
Cupping-Glasses to the Shoulder
blades. But if it turn to an *Em-
pyema* or a Consumption, it must be
otherwise cured, of which you
may see more in their proper
place.

§. 14.

THE Paracelsists prescribe va-
rious Medicines in this Di-
sease, which are said by their in-
ternal signature to be proper for a
Pleurisy; namely, Nitre, Tartar,
Sulphur, Antimony, Sal Ammoni-
ack, &c. Outwardly they apply
the Jaw of a Pike, Larkspur, and
Flowers of dry Dock. They com-
mend the following Compositi-
on;

of *species diatragacanthi frigidi*
ounce, Penidies, Sugar Candy
each two drachms, Syrup of Vio-
lets, Jujubs each half an Ounce.
Take a *Loboch*.

They highly commend the fol-
lowing Decoction for raising of

of scraped Liquorice one
ounce, Raisins, Figs, Jujubs,
best, sweet Prunes each No
four cold Seeds, Seeds of
mallow, Marsh-mallow each two
drachms, Flowers of Chamomil,
violet each one pugil, whole
barly one pugil and an half.
Take a Decoction in Barly-wa-

to this end they prescribe Fo-
mentations of a Decoction of Mal-
low, Marsh-mallows, Fenugreek,
seed, and Figs, which they put
in a Bladder, and apply them hot
to the pained Side. Or instead
of these they apply a Cataplasm,
of the foresaid *Species*, and
other Pectorals, or an Oynt-
ment of Grease, of Duck, Goose,
Hen, Oyl of sweet Al-

Take of the three Salts each one Ounce, both Tartars each half an Ounce, Mummy one Drachm, water of Baum, Dodder of Thyme, Bugloss each what is sufficient. Distill them in an Alembick. The dose from one scruple to four.

Paracelsus himself cured several Pleuriticks by Bleeding in the inner Vein of the Arm on the same side, and then giving spirit of Tartar in drink. He affirms, he has cured many by *Turbith* or *Diaphoretick Mercury*. He condemns and despises Purges and Clysters, but not Vomits: however great care must be had in giving them, and they must be gentle. For I lately gave a strong Souldier a Vomit in a Pleurisy, which had like to have done much mischief. For he vomited abundance of Blood; and unless I had prevented it by Cordial Opiates, undoubtedly he had died of it. Therefore we should be cautious.

§. 15.

Helmont in this case blames an Acid; and proves it, because in a Pleurisy the Urine and Blood thicken as they come out, which is an effect of Acidity. He rejects Bleeding as an accursed Remedy; because a Pleurisy cured by Bleeding often leaves a Consumption behind it: And they that use Bleeding much, do often fall into this Disease. The acidity is easily cured by Diaphoretick Medicines. And this acid does sometimes damage the Spleen: for he remembers how, after he was cured of a Pleurisy, he felt a pain and swelling in his Spleen, which he

cured by drinking Crabs Eaten in Wine; and these questions not, but all agree per. Yet he first gave Stag's Pizzle, and drank of Goats Blood, upon Spitting of Blood and was abated. His never failing are these following; Stag's or Bull's Pizzle, Cichory, flowers of Horse dung, Boar's rook, but he prefers Goats before all; yet it must thus; the Goat must be tied to his Feet, and his hind be tied to his Horns, Stones must be Cut, Blood must be saved. Receipt;

Take of Goat's Blood *mon's* way one Scruple, of Stag's Pizzle one water of red Poppy one and an Half. Mix them a Draught. Or,

Take of Flowers of red Poppy, leaves of wild Cardus one Handful, Crabs Tooth each half a Horse Dung one Ounce Half. Boil them in a quantity of Barly-water, the colature syrup of what is sufficient. Let the Patient take now and then.

He also gives a Draught of Poppy flowers in Broth peats it several times.

§. 16.

of red Poppy one Ounce. Make a mixture.

To destroy the clamminess and acidity of the Blood ;

Take of water of *Carduus benedictus*, Cichory each half a Pound, fresh Horse dung two Ounces. Let the liquor be filtered. Add of Syrup of red Poppy one Ounce, Volatil Spirit of Sal Ammoniack half a Drachm. Mix it, and give five Spoonfuls.

Moreover he commends other Cordial and Anodyne Medicines, which refresh the animal Spirits, and hinder the kindling of the Blood, which blazes too much. Which intentions he answers by Pearl Juleps. He gives you this Receipt ;

Take of pearl-water of the Shops, red Poppy each three Ounces, *laudanum tartarifatum* twenty Drops, Spirit of Goat's blood half a Scruple Syrup of Violets six Drachms. Mix them for two times taking.

Externally also he advises Anodynes in form of a liniment, Cataplasm or Plaster ; such as Oynment of Marsh-mallows, Oyl of Sweet Almonds, *Emplastrum de Mucilagibus*, *de opio*, Oyl of Poppy, Marsh-Mallows, Henbane, &c.

§. 17.

AS for the Cure of this Disease, according to the Sybian hypothesis, it consists, 1. In removing Obstructions. 2. In restoring

He thinks the stagnation of the Blood in the Lungs must quickly removed : To which purpose (whatever some may say to the contrary) he extols Bleeding as the chief Remedy both in a Pleurisy, and Peripneumony, as good for removing the stoppage of the Blood, wherever it is. He gives this reason, because the Blood-vessels being much emptied thereby, it carries the peccant matter, and carries it another way. But he will not have the strength always considered, nor does he admit of any opening of Veins, whether on the one or on the contrary side. If the Patient cannot bear Bleeding, he advises the Cupping and Scarifying of the pained place. He recommends strong Purges and stibiate Vomits. He highly commends Clysters, and Lenitives, if the Fever is not violent. In the heat of the Blood he prescribes several Emulsions and Decoctions. To destroy the roughness and acidity of the Blood, he magnifies Precipitation, such as Crabs Eyes, Boar's Tooth, Carp stone, Bone of a Stag's Heart, Stag's Pizzle in Water, Goat's Blood, *Lapis prunella*, Salt of Urine, Harts-Horn, Volatil Spirit of Sal Ammoniack, Tartar, *mistura simplex*, and other things. Here are some of the Author's own Receipts ;

Take of water of red Poppy Flowers three Ounces, Fenil one Ounce and an Half, *Lapis Prunella*, Crabs Eyes each half a Scruple, Volatil Spirit of Sal Ammoniack one Scruple, Syrup

the Motion of the Blood. 3. In Correction of the extravasated and in some measure corrupt Blood. 4. In Maturation. 5. In opening the ripened Blood. 6. In cleansing the Apostem, when opened. 7. In healing of it up. Things that remove Obstruction of the Vessels, do also quicken the Motion of the stagnating Blood, and they are chiefly volatil Salts of Wine, Harts-horn, Soot, and volatil Salt of Goat's blood, which do not only dissolve and make fluid what is coagulated, cause Sweat and so expel the peccant Matter; but correct the Blood poured into the *Pleura* when it is devoid of Spirit and turned sowre: he praises this mixture following;

Take of Water of Parsley, Hyssop, Fenil each one Ounce, Treacle-water half an Ounce, Spirit of Sal Ammoniack half a Drachm, or volatil Salt of Harts-horn six Grains, *laudanum opiatum* four Grains, Syrup of red Poppy one Ounce. Mix them. Let the Patient take a Spoonful or two of this Mixture now and then, that so the Obstruction may be removed.

I have seen *Sylvius* cure several Pleuriticks in the Hospital at *Leiden* with this Medicine, without letting Blood. If the Obstruction be radicated, it is then difficult to cure; but I have heard him with his own mouth highly commend *Helmont's* Medicine, which is Crabs eyes boyled in Wine, and drunk : Or,

Take of Crabs eyes, a Pike's mandible, Bone of a Stag's heart each half a Drachm, diaphoretick An-

timony two Scruples. Make a Powder,

It is an excellent Remedy to imbibe an Acid: for the Blood, coagulated by an Acid, may be dissolved by such sort of Medicines. Among Externals he recommends divers Unguents, lenient Fats and Oyls, and Applications made of aromatick and lenient Plants, and Bags to be laid alternately, as there shall be occasion. For he holds, that the virtue of these things can penetrate the Pores of the Skin, so remove Obstructions. The Motion of the Blood is restored chiefly by Sudorificks, especially the foresaid volatil Salts; particularly Bleeding in the beginning of the Disease which according to the Patients Disposition and Strength may be repeated several times for at every Bleeding the Blood is moved. At length if the Matter tend to suppuration (which by all means should be prevented) and from that to an abscess, Ripeners, Emollients, Lenients, and Healers must be used for which purpose he commends five drops of *balsamus sulphureus* or *terebinthinatus*. This not only cleanses and heals the Ulcer, but by its oyliness the volatil Salt expels and enervates the sharp Acid, which is the cause of the Pain.

§. 18.

The Cartesians commend Bleeding and the following Medicines, both inward and outward.

§. 19.

WE have done with other Mens Remedies, now we come to our own. When a Pleurisy is caused by a coagulating Acid, and by the Motion of the Blood being hindered, we presently bleed. But if there be Malignity we omit it, and instead thereof we cup and scarify, apply Leeches in several places, because these may be born, without much loss of Strength. All that remains to be done, is to dissolve the Blood, coagulated by an Acid. And the principal things that do this, are, such as are of an *Alkali*, as well fixt as volatile. For Volatils do not only imbibe an acid; but they dissolve Alexipharmack and Diacetic, such as the Urinous Spirit of Sal Ammoniac, the volatile Spirit of Tinctura bezoartica mixt with Essentia anodyna Wedelii. To the Declension they may be added with more fixt Specificks, as, with Diaphoretick Antiseptic, Boar's Tooth, Harts-horn, &c. Topically prepared, Crabs mandible of a Pike, which is the effervescence of the acid is excessive, are more proper than Volatils. This is an Antipleuritic powder of Ludovicus for the same pur-

If the Pleurisy be fierce and malignant, I dare recommend this following Antipleuritic, Bezoartick Tincture of mine, which I lately experienced much in the Epidemick Pleurisy.

Take of the powder of volatil and fixt Salt of Vipers each half a Drachm, Peach Stone two Drachms, Bark of the Root of Cinnamon, Flowers of red Poppy each three Drachms, Root of Elecampane, *lignum colubrinum* each half an Ounce, Goats blood three Drachms, Castor one Drachm, Spirit of Wine camphorate, and impregnated with Crabs Eyes eight Drachms. Digest them, then let them be thrice separated according to Art, and let it be tinged to redness with red Poppy flowers.

In defect hereof *Tinctura Bezoartica Michaelis* or *simplex* may be given. But Expectorants must always be given between whiles, or must be mixt with them: for instance;

Take of water of *Carduus benedictus*, *Loboch Sanum*, red Poppy each one Ounce and an half, *Tinctura Bezoartica* either *nostra*, *Michaelis*, or *simplex* one scruple, Volatil salt of Goats blood seven grains, *Laudanum opiatum* one grain, syrup of red Poppy six drachms.

This Mixture must be repeated every four hours, especially when there is Malignity. In the mean time let him drink a Decoction of Stag's pizzle. The following Emollients are good to temper the acid which inflames the Lungs or Pleu-

ra,

Take

of the mandible of a Pike fish powder two parts, Goat's blood, yellow Sulphur each one Part. Mix them. Make a powder, to be given twice thrice a day in red Poppy

Take of Linseed Oyl one Ounce and an half, *Species diæreas* one drachm, Mix them for once taking.

Or this of a noble *Helvetian* of *Friburg*, communicated by *Juncken* in his excellent Treatise.

Take of water of *Cardus benedictus*, *Maria* each three Ounces, Oyl Olive one Spoonful, nine Medlar Kernels powdered. Mix them. Make a draught for once. Or,

Take of water of *Loboch Sanum*, white Lilies, red Poppy each one Ounce, extract of red Poppy half a Drachm, Saffron four Grains, Sugar Candy what is sufficient. Mix them. Or,

Take of *Sperma Ceti* one Drachm, Syrup of Violets, Marsh-Mallow each one Ounce. Make a *Linfus*.

When a Pleurisy comes to Suppuration, this following will be proper;

Take of Syrup of Tobaccó two Ounces, water of Scabious, Juice of Speedwel, Ground-Ivy each one Ounce. Mix them for several times taking.

At length we conclude the Cure with Crabs Eyes, Coral, and other fixt *Alkalies* mixt with Opiates, sometimes without them. We shall give you some Receipts, with which, through God's Blessing, we cured several;

Take of powder of Boar's Tooth, Crabs Eyes, Goat's Blood, *Crystal-lum Minerale*, Flowers of red

Poppy each half an Ounce, mix them for two Doses.

Or, where there is a large quantity of Serum, this following;

Take of Crabs Eyes, Mandrake Pike Fish each one Scruple, five Cinnabar six Grains, *num Opiatum* one Grain, Coral six Grains. Mix them. Make a Powder for once taking. Repeat it often.

I have cured several Pleurisies by thrice giving a Draught of Interstice of the inside of a dried and powdered, in red Poppy water; but then I have also found Snail-shell equal. Or,

Take of Crabs Eyes, Goat's Blood each one Scruple, yellow Sulphur, *Antimonium Diaphanum* Root of Burdock powdered twelve Grains. Mix them. Make a powder for once taking. Given in red Poppy water.

But if in this Disease the Pleurisy grow hot for want of Serum, the following Emulsion will do.

Take of Seeds of Melon, *Maria* each two Drachms, Almonds half an Ounce, of red Poppy, Burdock Root, *zonera* each what is sufficient. Add of the Mandible of a Hart's-Horn Philosophically prepared, *Antimonium Diaphanum* each half a Scruple, Sugar Candy. Mix them. Make an Emulsion.

About Fifty drops of Tincture of Red Poppy may be given mixt with Antipleuritic Spirit. For as are Thirsty, if there be Vomiting nor Looseness, we *Clyffus Mineralis*, Spirit of Salt Spirit of Nitre in a proper coction. In a Phlegmatick curisy I have given Spirit of Ammoniack anisared, with good effects. But if the coagulating come from a Scorbutick disposition, *Cardilucius* his Antipleurick Medicine will be proper, wit, Juice of Water Cresses drawn may be given mixt in Wine. If the Sulphureous particles be coagulated and mixt with a thick and rough *Mucus*, must be incided with *Oxymel Squills* or Simple. When the blood is turned to Pus, or a Ulcer is made, and great quantity of purulent Matter is raised, then you may with good effects give *Balsamus Sulphuris*, *anodina Wedelii*, or *Balsam of Peru*. When Pain arises from a conflict between acid and fine particles, which contract Fibres, we must fly to Opium, in which case I have given *anodina Wedelii* with good effects. Purgatives must not be used but in the end of the Disease. And Vomits must not be used at all. We approve of dis- outward Applications, Un- Oyls, Cataplasms, Fomen- tations, &c. Here are Receipts;

of *Unguentum Antipleuriticum*, *anodina Wedelii*, *Dialthæa Composita* each one Ounce, *Crocus* one Scruple. Mix them.

of Oyl of oblong Gourds

one Ounce, Scorpions half an Ounce, Chamomil, white Lilies each two Drachms, Saffron one Scruple. Mix them. Or,

Take of fat of the Mountain Mouse three Drachms, Oyl of Sweet Almonds, white Lilies, Chamomil, Mullein, Poppy by expression each one Drachm and an half, Henbane one Scruple, the distilled Oyl of Dill, Chamomil each six drops. Mix them. Or,

Take of Root of Marsh Mallows one Ounce, white Lily half an Ounce, leaves of Mallow, Marsh-mallow. Pellitory of the Wall each half a handful, Flowers of Mullein, Melilot, Violets, Chamomil each two Pugils, Linseed, Fenugreek each one Drachm. Powder them and boyl them in Milk for a Cataplasim. Or you may put the Powders in a bag, boyl them, and apply them, for it is excellent.

Some boyl ten Onions in Milk to the consistence of a Pultess, and apply them to the pained Side. *Digby* Commends a hot Loaf, as it comes out of the Oven, cut in two with some Venice Treacle mixt with it, and applied hot to the Side affected. I have eased several Pleurisies with the following Fomentation;

Take of Miller two handfuls, Flowers of Chamomil, Melilot each half an handful, Linseed one Ounce and an half, Crude Salt two Ounces. Mix them in a Frying pan, and sow them in a bag, for outward application.

CHAP.

C H A P. IV.

Of a Consumption.

§. I.

THe next thing that offers it self to our consideration is a Consumption, a sad Object to the beholders, being in all appearance, but a walking Ghost;

Ossa tegit macies, nec juvat ora cibus.

Names.

This Disease is called the Phthisick, Consumption, Wasting of the Lungs, Extenuation of the Body, Consumption of the whole Body, Macilency, an Ulcer or Exulceration of the Lungs.

Definition.

And it is usually delineated to be *A Consumption of the whole Body, with a lingering Fever, and a purulent Cough, caused by sharp Particles, Tubercles or Stones that exulcerate*

and corrode the spongy substance of the Lungs. For all People in the disease do waste and consume, and shows it self at first in a Cough without Spitting, but in process of time by continual Spitting.

Kinds.

Yet there are other sorts of Consumptions; as a spurious Consumption, when part of the Body, or the whole wastes without any Consumption of the Lungs, when only the Lungs are affected, and this is sharp, and such are usually attributed to some Indisposition of the Head, Stomach, Liver or Spleen, hungry Worms also, as the vulgarly called, make Children very lean, and there are several other sorts of Consumptions, which for brevities sake I shall pass over, but I shall collect some notice of them in their proper place.

§. 2. Part affected.

Concerning the Part affected Authors are not agreed. *Syl-* blames the Glands of the Lungs; *Barbette*, the Stomach and Glands of the Mesentery; but here, that is, in a confirm'd Consumption, the Lungs are affected, I think every Man will allow: on my own part I dare affirm it: I have opened above eighteen dead Bodies, and found the Lungs ulcerated in them all but one, who had an Ulcer in the Membrane that encloses the Rihs. Consult *Wentius his Practicall Anatomy*. Therefore I am of Opinion, That primarily the Lungs, which ventriculate the Blood, are affected; secondarily, the Blood and Heart, appears from the Fever and swelling of the whole Body, which hence is made manifest, if we consider the Symptomes, namely Difficulty of Breathing, a very troublesome Cough, and Spitting of purulent Phlegm: for the Lungs are a Body made up of mere Vessels, and therefore easily receptive of such Ulcers.

§. 3. Diagnostiks.

First this Disease is very difficult to be discovered; yet certain Signs may be observed of a Consumption approaching; *Hippocrates lib. 1. de morb.* does elegantly describe, And from these Causes, *Seed* (says he) Pus is gathered in the Lungs; if he that is held with an inflammation of the Lungs purge not on critical Days, but the Spittle and Phlegm remain in the Lungs, he suppurates; who, if he be presently taken into cure, for the most part e-

scapes, but if he be neglected, then he is corrupted by the putrefying of that which remains within, after that he is ulcerated and gathers Pus, and never after gathers any nourishment worth speaking of; nor does he raise any thing by Spittle, but is suffocated, and continually oppressed with greater difficulty of Breathing, and when he does breath, he rattles, and then he wheezes in the upper part of his Breast, and at length, when his Passages are stoppt by his Spittle, he dies. Now the Signs, which shew that a Consumption is coming, must be very diligently observed, that, if possible, so pernicious a Disease may be prevented, and according to *Hippocrates* they are, a lingering Defluxion, a tickling Cough, Spittle more bitter and sharp than usual, a small Heat, and among the rest, we may reckon a consumptive Disposition, which *Hippocrates l. 1. Epid. c. 1.* does more fully describe, namely, if the Chest be narrow, the Breast strait, the shoulder-blades sticking out, and if the Neck be long; also an hereditary Disposition gives no small suspicion of the imminent danger of this mischief: for instance, If the Parents of the Party died of a Consumption: for usually one troubled with the Stone, begets one troubled with the Stone, a goury Person, one troubled with the Gout; an Epileptick, one troubled with the Epilepsy, and why not a consumptive Person, one troubled with a Consumption? For healthy People breed healthy Seed, and diseased People a diseased Seed, which Disposition is also transferred to the Children by morbid *Idea's*, or by an exotick Ferment, which in time grows ripe, and shows the hereditary Defects, as I could make out by

by many Instances, That Children are altogether as much the inheritors of their Parents Diseases, as of their Estates, which thing deters many from marrying such Persons. But if one have spit Blood, and continue so to do, if he be troubled with a violent Cough, if he breath hard, if he raise a greenish, yellow, ash-coloured, purulent or blackish Spittle, if when spit into the fire, it send out a stinking smell, or sink in Water, by reason of its stickiness and weight (though sometimes all the time of the Disease, there appear nothing of Blood in the Spittle) all these give shrewd Signs of a Consumption, especially if the Fever grow higher about two hours after Meal. There is the same danger, when we find white, chalky Stones voided, as the *German Ephemerides* testifies. However we must take notice, That these Signs do not hold infallibly true. The Signs of a confirm'd Consumption, are, a notable Emaciation of the Body (for the sharp Blood of consumptive Persons nourishes not, but rather corrodes) frequent Coughing. Expectoration sometimes easy, sometimes difficult, and that oftentimes bloody, purulent, sanious, fetid, and of several Colours, a dull pain about the Shoulder-blades, and Breast, Wind in the Stomach, the Appetite sometimes decayed, sometimes depraved, sometimes too great (or canine) sometimes excessive thirst, and sometimes the swelling of the Feet is grievous, by reason of the Humors reflagrating in the Vessels of the Feet, and at length breaking the Lymphaticks, the Belly is sometimes too cosive, sometimes too loose, excessive Sweats which smell soure do emaciate the Patient, e-

specially in the night: according to the Opinion of the the nutritious Juice is simulated, though it be the Parts for their nourishment but because of the destruction of the Pores it slips away, and out at the Habit of the hence are these colliquations in bedtick Persons; these in this case frequent swoonings, slow animal Motions, frequent and weak Pulse, a Fever some few hours, as before, after Meal, with flushing the Face, showing it self quicker, and more intense towards Evening; for in a Consumption the Blood contracts any, because it continually through the purulent Lam cause when new Chyle to the Heart, it cannot mix with corrupt Blood, although it be duly elaborated in the Stomach and Intestines, whence proceeds an unequal mixture, and a various contrariety, by reason of an irregular mixture of the Parts; whence it may otherwise be, but that after the Fever must be increased, sometimes the Legs are in pain, because of the action of the purulent Matter on the Stools and Urine, sometimes there appear purulent, and only excretions; in a confirmed Consumption there is a loss of the Pores are obstructed, the moisture is voided, in the also the Hair falls off, because the Pores of the Skin are moved by sharp Humors, and the the Hairs are destroyed; in People also abundance of bred, the Nails grow crooked. Patients look with an Hippocratic

§. 4. Causes.

face, that is, their Nose is sharp, hollow, Temples sunk, tips of their Ears cold and contracted, Skin about their Forehead and sides of their Hands hard and dry, colour of their Face pale, livid, black, &c. One shall seldom see with all these Signs we have mentioned, in one single Patient, some more appear, in others less. These make up a pathognomonic Sign of a Consumption, a violent Cough, difficult Breathing, excretion of the Blood, a lingering spittle, and purulent Spittle, yet Observations of some famous Physicians testify, That many have died of a Consumption, without any of these Signs: But whereas some Physicians will have a true Consumption to be known by the sinking of the Spittle put into warm water, and by the sinking of it, when spir upon live Coals, they are mistaken, since viscid Phlegm, if it has been of any continuance, I have often observed in spleenick and scorbutick Persons) may sink, and by reason of its weight sink to the Bottom. Fat comes in Urine, because the Acrimony of the Pus fetches off many fat and gross Particles with the other particles of the solid Parts, which are dissolved in Urine, when they are mixed with Urine, by reason of its smoothness, cannot mix with it, and therefore swim at the top. When the surface of the Patient's back is touched with the Hand, a Heat is perceived, which arises from abundance of volatil Salt, exhaled by the Pores of the Bo-

NOW we enter the spacious field of Causes, and according to our Method we gather the Flowers of divers Authors into a Posy. According to the Opinion of the old Galenists, the proximate and immediate Cause is an Ulcer, the preceding Cause whereof is a sharp, corroding Humor, which, as a Catarrh, falls from the Brain upon the Lungs, and then exulcerates them; they say, this Humor is sharp or salt Phlegm, which causes a fierce Catarrh, that corrodes the Lungs, they being excessive soft, tender, and very apt to corrupt, and at length breeds a putrid Ulcer. According to these Men therefore a Consumption comes from a Catarrh, caused by a cold Air, or by immoderate drinking of strong Wine, and also of very cold drink, if drunk in great quantity, especially upon the Body's being violently heated before: For any sharp Humor or Vapour, which is but able to corrode and wound the tender substance of the Lungs, or their Coats, may easily produce this Disease. Also an Apostem of the Lungs, when it breaks, and the purulent Matter falls on the Lungs, and stagnating a long while in them acquires Acrimony, must of necessity cause an Ulcer. So also when a Pleurisy or Peripneumony end in a purulence, and the Pus, as we said in the Chapter foregoing, is not raised within 40 days, from the first day of its appearing, then also this deplorable Disease is caused. And a continued chronical Cough may, by its violent Motion, break the Membranes of the Lungs, for too much

Motion

Motion hurts, And they prove it hence, in that Singers, Preachers, and such as lift heavy things, are subject to such Diseases, and the Ancients do not deny, but that this Disease has sometimes its rise from Vomiting, or painful Child-bearing, through too violent Motion, and breaking of the Veins or Arteries ensuing thereon.

§. 5.

THese things premised from the old Oracle of Medicine, now I will see what the Opinion of the more Modern Chymists is, concerning this Disease, which appears not to differ much from the former: for theirs is, that it is an Ulcer, and the Disease saline by right of predominance; for all erosion comes from Salt alone. Now as long as this balsamick Salt, tempered with the viscous sweetness of the Sulphur, and the Nestarean irrigation of the Mercury, observes the proportional Laws of Confederation, so long such Unity and Vigor is preserved; but when upon its effervescence and turgescence it separates from the other two, and endeavors to set up for it self apart, then it raises a War, and rests not, till it sit down in the Lungs and fix there. If therefore the mechanick Spirits, being weak either by Birth or Disease, are not able to separate the mucilaginous Impurities that stick close to the Food, nor to expel the superfluous dissolved Salt by Sweat, Urine and insensible Transpiration, then comes this Disease: For the Salt of the thing uniting with the Salt of Nature breeds Tartar, upon the breeding of which, Obstruction follows, and the Balsam is al-

tered, whereby Passage for the ments and free Ventilation of Spirit of Life is stoppt; whereon follows Inflammation, and cause then the Salt is dissolved, and putrefaction; from Putrefaction cause the corrosive Salts being at liberty are produced into Erosion and Exulceration. the summ of the whole is, that Chymists do blame Tartar, or salt, or some other way by which corrodes the Vessels of the Lungs.

§. 6.

Helmont ascribes the cause of this Disease to a single strange Ferment, which is an error in the vegetative Faculty, that Phlegm and an obstinate Filage is bred of good food, but the *Archeus* is very often faulty in correcting the acid Blood, and injuries of the Air also do the as it is able to invade the substance of the Lungs, and alter the Ferment, and the Pulmonary *Archeus* is of a sumprive Disposition. For the Blood has contracted a stony, and is inept for Nutrition of the Parts, upon its coming into the Vessels of the Lungs, and from them, whence proceeds the Blood, often attended with a violent Spittle, and then a Consumption: Because the *Archeus* casts this putrid Afflux, being cast by the sharp and corrosive Salts it out; which same may easily be corrupted by the that are salt, sharp and acrid the Smoak. But he observes, That Spittle can come from the Head to the Lungs, or any thing can fall from the

on the Lungs, but that it rather proceeds from the proper fault of the Lungs themselves.

§. 7.

Allis (who on good grounds reckons this Disease among those of the Breast, other Diseases of the Breast into it) judges that the cause of this Disease lyes in the Breast, proceeds from solution of Union in the Lungs, and from an Ulcer thereupon: wherefore to distinguish it from a Consumption, which chiefly proceeds from a corrupt and highly polluted Blood, he has thereby lost its nutritive use, he calls this Disease a Consumption of the Lungs. Now an Ulcer of the Lungs, according to him, arises from excess of Humors charged by the Blood upon the Lungs, which get into the tracheal and pulmonary Vessels, fill and distend them; for when the Vessels are broke, there is an evasation of the peccant and putrid Humor, whereby at length this sordid Ulcer is bred. And he holds, That the Lungs contract this consumption from a sower Blood, which has lost its consistence, and its ferocities both out of the Armonick and tracheal Arteries, the substance of the Lungs, sometimes from the fault of the nervous Juice, and by several Arguments and Reasons he shows, that a Consumption may easily arise from obstruction of the Lymphatics, and suppression of usual secretions.

§. 8.

Sylvius blames the Serum most, as by its briny, salt Acrimony it not only vellicates the Lungs into frequent Coughing and tires them out, but also at length frets the Coat of the *aspera arteria*, which being fretted, this Ulcer of the Lungs follows. He holds also, That oftentimes at first the pancreatick Juice is not well mixt with the Bile; whence it comes to pass, That the over thick Chyle is not duly transcolated through the Glands of the Mesentery: for thus the thicker share of it sticks in the lacteal Glands untranscolated, and being crammed up there it hardens, but the serous Part of it only is carried by the *ductus thoracicus* towards the Heart; for he will have it, That by the Laws of the Circulation of the Blood, the Vesicles of the Lungs may be filled with a too serous Lympha; inferring from thence, that a Solution of Continuity, and then an Ulcer may easily be raised.

§. 9.

The Cartesians maintain, and that upon good grounds, That a Consumption arises from an Afflux of acute and sharp Particles, that eat and corrode the Lungs, whether these vitious Particles get into them out of the Arteries or lymphatick Vessels in manner of a sharp Catarrh, or when an Apertum in a Quinsy or Pleurisy breaks, and the Matter runs into the cavity of the Breast; and hereby they prove it, because all that follow distilling of strong Waters, and other chymical Operati-

T
ons

ons too much, also they that work in Lime, such as Bricklayers and Plasterers, do usually, by reason of the Sharp Subtil and Volatil Particles, which arise from such subject matter, dy Consumptive. And for the further confirmation hereof, there is not one Physician but prohibits Sleeping in a Room that is newly plastered: for such acute, volatil Particles do not only volatilise the Blood, but they fret the very Coats of the Arteries, and when they are fretted, the Blood must needs run out, whereupon ensues Spitting of purulent Matter, according to *Hippocrates*; for it is unanimously agreed upon both by the most eminent of our faculty, and by the *Cartesians*, as appears from *Cart. Princip. Philos. part. 4. art. 92.* that *Pus* may be made of Blood. The Body also wasts because of the Acrimony of the *Pus*, for *Pus* has much Salt in it.

§. 10.

NOW we will give our own opinion; and I think the immediate and proximate cause of a Consumption is an exulceration of the Lungs. Nor let any man doubt that there is an Ulcer in this Disease, for in several dead Bodies, as I said before, that I have opened, I have seen an Apostem with mine own Eyes. I judge the proximate cause is acid, sharp Particles, but volatil, which corrode the Substance, Vessels and Vessels of the Lungs, and also turn the extravasated Blood into *Pus*. For that an Acid has a Corrosive and Exulcerating faculty, appears from the application of Spirit of Nitre, Sulphur, and other acids

to the fleshy parts, where we see by the appearance of white purulent matter, that they may corrode; whence we may conclude, that the same Acid turn Blood into *Pus*. For (instance) if upon common Salt dissolved in a *Lixivium* a Spirit be poured, its reddish colour will turn White. Now, apply this to the present purpose, we must know that in the Blood (as is granted from the analysis of it) there are oily parts, which make up the *Sulphur*, and Sal Lixivious, and Acid ones, not unlike the Particles of the first experiment; and so the Acid may overcome the *Sulphur* in the Blood. I could produce more experiments to this purpose, but now for brevities sake I shall refer the Reader to *Willis, c. 9. l. de Generatione*. Among the ancient Causes I reckon Acrimony of Blood as chief, for if we well consider all Consumptive Persons, their Symptoms, we shall find nothing but signs of a thin Blood, that exulcerates the Lungs, sometimes a Consumption arising from sharp exhalations, and from Slaking of Lime. Also Consumption arises from chondriack Melancholy, when the Mesenterick Glands and Lungs Vessels are obstructed, so that little of the Chyle is carried into the Blood, wherefore the Blood grows thin and causes Consumption. But as for great difficulty of breathing in this Disease, it is usually by abundance of *Pus* stuffed up in the Lungs; which frequently oppresses them; so that natural respiration does not only for discharge of fuliginous matter as the Ancients held, or

ing or Circulation of the Blood, for Formation of the voice; by means hereof the Blood is mixed and dissolved in the Lungs, whereby the Sulphur of the Blood is volatilised, to the end in an augmented Fermentation in the Heart it may unite with volatil Salts of the Blood, and become a spirituous Gas, or vital, Spirits, and in probability such that so the Blood may be changed, as the Excellent *Ennall* has observed. Now I shall give you the causes in this Disease according to my own Judgment, for so the universal cause will more exactly ap-

hence therefore should we know the cause of a Cough, but acrimony, i. e. from the acrimony of the Pus, or of some other humor, stopping and stagnating, which solicits the Lungs to cough, what is troublesome to them? I describe the wasting and emaciation of the Body to Blood that is vitiated and made sharp by an acid; for these acid and sharp Particles of the Blood are voracious, and do plainly devour or consume by colliquative Sweats, and mastic and oily parts, which are necessary for Nutrition, whereby the solid Mass of Blood is rendered unfit for nourishment; and if little or nothing comes in to supply the lost parts, it cannot otherwise be, but that the body will by little and little decrease and consume.

Moreover I derive a slow Fever from an unequal mixture of humors, as I also do the flushings especially after Meals, because the Chyle in a few hours after eat-

ing is turned into too sharp a Blood, which then passes by the capillary Arteries to the out part of the Skin and causes a redness of Cheeks.

Lipothymies or Swoonings, which show themselves in a confirmed and mortal Consumption, arise from a vitious Effervescence of the Blood, or rather from a vitious Acid, that turns the Blood into Clots.

A Looseness (which supervening the Patients, not only by *Hippocrates* his authority, but from my own observation, must be given up as lost) comes from hence, because by reason of the great Acrimony of Humor and Dissipation of Spirits ensuing thereon, it cannot otherwise be, but that the Pus in the Breast must by its Acrimony taint all the Blood, and make the very bile sharper, which being poured out of its bladder, of Consequence there will be a continual provocation to stool; for in above six Consumptive Persons, that I have opened, I found the Gall-Bladder quite empty of Gall, and ever since I have suspected, that in such as are inclined to a Consumption, their Blood at first is made over sharp with Bile, which Bile also in Consumptive Persons is for the most part of a Saline, Oily, Volatil nature: wherefore in the first degree of a Consumption People complain of a bitterness in their Mouth, all which things argue an evacuated and volatil Bile.

If the Hair falls in a Consumption, it signifies that the Blood is so sharp, that it eats the Roots of the Hair; for the sharp Pus mixt with the Blood, as it is discharged on other parts,

so also on those of the Head upon the little Glands, that stick about each pore of the Skin, which are the Roots of the Hair; for where such Glands are, there are Hairs, and the whole Body is hairy, though the Hair be not seen.

Now the rest of the Symptoms and their causes will be plain from what has been said, so that we will insist no longer upon their explication, since it is evident that all these evils flow from one source, that is, from a sharp Acid, or Bile, lying in the Mass of Blood: Wherefore no Consumptive Person dares drink acid Spaw waters but at his peril, because of the Vitriolick Sharp Particles; and the rest of the *juvantia* and *nocentia* will show you the same. Thus much of the Cause, now to the Prognostick.

§. II. Prognostick.

Consumptions come especially between the Eighteenth and Thirty fifth Years of ones Age, because there is not only abundance of Blood in Young Men, but it is also sharp, because of abundance of Choler (wherefore mark what *Horace* says,

*Non ego hæc tulissem calidus juven-
tâ, consule Blanco.)*

And the Vessels being filled with such Blood are easily extended, broken and corroded. A Consumption also is a Chronical Disease, and as in the beginning it is easie to be cured, so in progress of time it is incurable. Wherefore *Timæus à Guldinklee* l. 2. Ep. 2. says very truly, *In all my Practise, and I*

have practised above seven years, I could never revive that had an Ulcer in his perfect Health, though I had thing unattempted, that may conduce to the Cure of scase. For exulcerated difficultly cured, partly of the tenderness and of their substance, partly son of their continuance which hinders their cure wherefore Patients often to Invectives against their an, because all Medicines ner have no effect. The same in one that confusion, and it is as know, as to cure it, because biffick Poyson siezes a Man and oftentimes it is not till the Disease be confirmed we may say the same of tions, for the harm is prevented in the beginning the Ferments of the still good, than when it ther, and the tone of the not only thereby destroy the Habit of the Body sted, for which there is never any hope of Cure.

We must therefore most prudent advice of Consumptions. Let their danger, and warn their end, and hereby quit our selves from all disgrace. But above want of Appetite is sumprive Persons, especially *hypochondria* be puffed Wind, and the Stomach led with a Mass of ill which all that are complain. Besides a Pulse, with difficulty of and a violent, cruel

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Life is in danger. Also faint-
colliquative Sweats, Fluxes,
oily and fatty Urines, Con-
vulsions and Cramps are most cer-
tain fore-runners and messengers
of Death, according to *Hippoc. sect.*
lib. 1. In whatever Disease Sleep
is disturbed, it is mortal; but if
refreshed, it is not mortal. Where-
fore the disturbed sleep of Con-
sumptive Persons, which does ra-
ther afflict than refresh, indicates
Consumption to be incurable.
Fetor alio (which yet I have
observed two years in a Consump-
tive Person) does show that Death
is far off; also shedding of the
skin, a delirium, swelling of the
feet, and swarming of Lice signi-
fy that Death is in the Port; a Con-
vulsion from old Age is also in-
curable. Consumptive Persons com-
monly dy when the Leaves do bud
in Spring, or when they fall in
Autumn. Some of them, who
had one long, are taken with
a Fit before their end, accord-
ing to *Hippoc. Coac. prænот. f.* Stink-
ing Spitte also denotes danger.
Hereditary Consumption, and
that is thorowly fixt, is
hardly cured. Death quickly fol-
lows a suppression of Spitting. But
must be observed in general,
that in every Consumption, this pu-
trid Spitte must be carefully dis-
missed, lest coagulated Serum
be mistaken for Pus. On the con-
trary, there is some hope left, if
the Pus be equal, of one co-
lor white, if easily raised, if the
Patient be obedient, the Symptoms
be mild, the Strength and Ap-
petite entire, and if the sharp, vi-
cious Humor be carried by meta-
stasis to the Lips or some of the Ex-
tremities, which Signs neverthe-
less are fallible.

§. 12. Dietetick Cure.

NOW having seen the nature of
this Disease, we will endeavor,
as far as is possible, to remove it,
and attain the end of our Art,
which is Health. We will begin
with Diet, by means whereof al-
one some most grievous Diseases
are cured, and without which Phy-
sicians do usually labour in vain.
And it consists in the legitimate use
of the six Non-naturals, so that
what are hurtful may be avoided,
and other more beneficial may be
observed. The first is Air; and
that which a Consumptive Man
should live in, must be temperate,
serene and mild, rather inclining
to cold; a hot and dry, and an in-
tensely cold one must be avoided.
Temperate Cold and moisture is
not amiss. The Autumnal cold
Air is hurtful, for it destroys the
Ferment of the Lung; wherefore
a Consumption is reckoned by *Hip-
pocrates* among Diseases that come
in Autumn, because a cold Air taken
in suddenly after the Heat of the
whole Body, is a cause of divers
Inflammations, and consequently of
a Consumption. The case is the
same, if it be impregnated with
contagious and ill figured Particles,
as *Wolfgangus Hæferus* in his *Herc.*
Med. has observed, how a Brick-
layer was killed by the foresaid cor-
rosive and sharp exhalations of
Lime: so *Valerius Maximus lib. 9.*
c. 12. n. 4. reports, That *C. Ma-
rius* ended his days by lying in a
room, that had been newly pla-
stered, and had a great fire in it.
Miners and Refiners of Metals run
the same fate, and metallick Mines
are well known for this mischief out
of which there arise arsenical Spi-

fits (which *Helmont* calls *Gas Sylvestre*) that are very offensive both to the Lungs and Brain ; and also to them, who fall uninstructed upon the Secrets of Chymistry, and handle Antimonial and Mercurial things imprudently, because of the aculeated, volatill Particles of the Salts, which exasperate the Lungs. Contagion may also be referred higher ; for sufficient security cannot be given for them, who live familiarly with consumptive People ; as we have an Instance in a Woman, that was no way predisposed to a Consumption, and yet by lying by a consumptive Husband she died of one, you may find also other instances in *Riverius*. Wherefore prudent Physicians, when they must visit such Patients as these, do prudently provide for themselves, by holding some Alexipharmack Trochiscs in their Mouths. This Disease in some places, especially at *Hanover*, is endemick. Compare our *Theatrum Theriac. exlft.* with what *Willis* says c. 6. de phibisi pulmonum. For upon some consumptive Persons, the influence of the Air is such, that the cause of the Disease may sometimes be wholly ascribed to the incongruity of the Air wherein they live ; and the change of Country or Air conduces more to the Cure than any Medicines whatever. Therefore most of the English, when they are troubled with a Cough or Consumption, flock over to the Southern Parts of France.

Meat and Drink act their share likewise ; Meat therefore must be of good Juice and easie Digestion, that the languishing and emaciated Body may recover Strength thereby. For which purpose Veal, Pigeons, Pullets, and Broths made thereof are proper, Hens Eggs,

Crey-fish and Broths of the Cockles, Snails, Oysters, are commended. Among sweet Almonds and Emulsions thereof, Raisins boyled with Dates and Figs, (the eating of his cured many of Consumptions, as Practitioners testify good. Milk, above all others affords good nourishment to emaciated Bodies, especially to that Creature that gives it, be it Barly and other annual Plants, Womans Milk (if it had) is the best, Allens drunk milk-warm, so that it be but observed in the Case we shall after prescribe. To the contrary, avoid all things acid, sharp, salt, bitter or which last, though they are able to inviscate the salted Mass of Blood, and in that are good, yet they are apt to harden and glew up the small Vessels of the Mesentery, and stop the passage of the Chyle, so that the wastes, and therefore in regard they are hurtful, as is in tract. de Arthrit. vag. testified. Let Onions also, Mustard, Leeks and all such be avoided as hurt by an Antipathy, of which nature Hare is, as *Galen* and others after him do say ; but I will vouch for them. All meat Food taken disorderly, though be of a good Juice, is hurtful, because it breeds Crudities, Acridities and Inflammations must not also rely too much on sweet things, for they hurt them privately a morbid Humour which when it is dissolved the Body puts forth its stings, coagulating the Blood and hindering Circulation : therefore

all course for their Health, who
 of sugared things, especially Su-
 of Roles, as is ordinarily done.
 is for Drink, strong Beer made
 of Rhenish Juice in the Spring is
 best to recover lean, consump-
 People. But because many
 cannot endure Beer, instead of it
 may use a decoction of Barly
 Raisins, or of the Woods, es-
 pecially of Sanders and Brazile, or
 may drink Whey, or Milk it
 in which Steel has been quench-
 Generous Wine, not egre nor
 hard, yet somewhat rough,
 taken at Supper, strengthens the
 Stomach, and encreases the Spirits,
 so contributes much to nutri-
 tion, especially in a Consumption
 in Age, or in any other, where
 the Animal Spirits are low. Yet
 one must avoid high drinking,
 and nightly good fellowship, espe-
 cially where Men drink Wine, be-
 cause it thins and sharpens the
 Spirits, enrages and weakens the
 Stomach, and destroys the Tone and
 Alimentation of the Stomach; what
 then, if Drunkards grow
 corpulent? Also drinking cold
 Beer, when one is hot may cause an
 Inflammation, and why not a Con-
 sumption? For all the Faculties
 that govern the Body are thereby
 disturbed, so that the whole Body
 cannot chuse but be disordered.
 Wine also in this case must be a-
 voided, as one would avoid Poyson;
 indeed it is *Aqua Mortis*.
 It is well known of what moment
 Motion and Rest are: for with any
 remarkable Motion of the whole
 Body, a violence and detention of
 the Circulation must necessarily concur,
 by consequence the Circulation
 of Blood in the Heart is increas-
 ed, and so being violently forced
 forward, it may easily break some

little Vessel or other: Thus I ob-
 served three by their preaching too
 loud fell into a Consumption. For
 in over violent Motion the Animal
 Spirits are also exhausted, whereby
 the Humors are rendered temperate
 and sharp, and often become the
 Authors of spitting Blood, and of a
 Consumption. Too much Rest
 likewise is naught, because it dulls
 the Humors, whereby is caused a
 Costiveness, Stoppage of the ordi-
 nary course of the Hæmorrhoids,
 and *menstrua*, and the Blood is ren-
 dered sharp and corroding.

Sleep and Watching must here
 be moderate, and according to
Septalius his advice, a Man must
 sleep more than he wakes. The
 Belly must neither be too bound,
 nor too loose, but if it be costive, as
 in Consumptions it frequently is, it
 must be loosened by Solutives. All
 other Excretions also should suc-
 ceed either naturally or artificially.
 Because, if there be a discharge of
 what ought to be retained, or a re-
 tention of what should be discharg-
 ed, this Disease may easily ensue:
 For when the Hæmorrhoids or
Menstrua are stoppt, they do not seek
 a Passage by the hæmorrhoidal or
 uterine Vessels, but by those of the
 Lungs, and the *aspera arteria*; where-
 upon something may easily remain
 in the Lungs, putrefy, grow sowre
 and shew its venom there. A sup-
 pression of Seed also may cause
 the same Disease.

The Passions of the Mind must
 be moderate, and Men must not
 indulge its Emotions; Care, Grief,
 Frightfulness, Fear, Anger, Love,
 too much use of *Venus*, Meditati-
 ons, nor Night Studies: for all
 these things disturb the Animal Spi-
 rits, taint the Mass of Blood with
 heterogeneous Particles, stop and

Coagulate it, disturb Mens Faculties, and put all into confusion.

As to the natural Causes, a cholerick Complexion, which is easily put into a Heat by any of the six Non-naturals, is very subject to a Consumption; which Hippocrates seems to have had an Eye to, when he says, That the time of Youth, by reason of its cholerick Constitution, the great turgescency of Humors, and frequent Errors in Diet, is subject to this Disease. So also Women, because of their sedentary life, and Maids by strait lacing themselves according to that of Terence, *Junceæ appareant, atque juvenilibus placeant*, do easily contract this, and other dangerous Diseases of the Breast, because they stop the Blood in its Motion to other Parts,

§. 13. Pharmaceutick Cure.

THE Ancients take their Indications from three things. 1. From the Ulcer of the Lungs. 2. From the Fever. 3. From the extenuation of the Body; yet so, as to have due regard to the Symptoms, viz. the Fever, Catarrh, Looseness or Costiveness, Thirst and want of Sleep. For cleaning therefore the Ulcer of the Lungs, they use Preparers or Abstersives, both inwardly and outwardly; such as *Syrupus de hyssopo, de liquirit. capil. Vener. Mede*, Decoctions of Barly with Sugar, Figs, Raisins, Liquorice, Hore-hound. Outwardly they commend Cataplasms and Plasters of Linseed, Fenugreek, Marsh-mallow, with Oyl of Mallow, Honey, &c. Then they divert the Catarrh from falling on the Lungs by Clysters, Eyrhines, Blood-letting,

Frictions, Ligatures, Cupping, Issues and Bathings. After they advise such things as may the Matter from falling on the Lungs, such as Bole Armenick, *ra sigillata*, Conserve of Roses, gar of Roses, *Diacodium* and Opiates, such as Treacle and thridate. But in salt and distillations, besides the things said, they commend the Decoction of *Guajacum*, Sanders, &c. Further, for Absterfion of the Ulcer, they use things that both cleanse little and also expectorate, such as Syrup of Violets, Roses, *Solomon's Seal*, Polypody, Manna, Lennitive, *ary*, *diacassia*, Rhubarb, Polypody, *Mel solutivum*, &c. At last for the cure and cure of the Ulcer, they use such things as unite, coagulate, agglutinate and breed a Callus, they try to do this by Decoctions of Astringents, such as Sugar, Bole Armenick, Foxes Lungs, *gon's-Blood*, Harts-horn, Plantain, Crabs-claws, *Gum bick*, *Diapenidium*, &c. They prefer Milk above all the others, because by its serous Part it cleanses, by its caseous Part it binds, by its butyrous Part it affords moisture; concerning the use of it see *Septalius cap. de phthisi*. In his own Opinion hereafter. In the second Indication they use Moisteners and Coolers, which shall be mentioned anon. For the third Indication, to wit for Extenuation, they use divers Waters, such as Calves Livers and Lungs, and other viscid Animals; and neglect restorative Broths, Electuaries, Sweet Meats, &c. Of which and Externals, for the purpose, there is no farther to say. This was the old

§. 14.

Use the *Chymists*, That they may remove the stoppage of Lungs, and correct the hostile Spirit of Salt, whether it be coagulating, or dissolving and corroding, Spirit of Tartar, *Salis dulcis*, Flowers and Balsam of Sulphur, Spirit and Oyl of Turpentine, Sassafras, Myrrh, &c. But for moderate Asthensions consolidate and strengthening they magnify Nature of Corals, Liquor of Pearl, Essence of Saffron, and *Laudanum Paracelsi*; and above all they commend *Corallatum dulce Mercurii diaphoretici*, by which Medicine *Paracelsus*, as his Epiraph tells us, cured many Consumptions. Also to oppose this Disease they draw distillations from Gold, Silver, Pearl, Mummy, Humane and Swines blood, Bawm and other pectoral herbs. *Paracelsus* also maintains, that a Wild Mouse reduced to Powder and given is an excellent Remedy for a Consumption. He takes several things also from the Dietetic fountain, as Liquorice, Curcuma, Purslane, Lettuce, both sorts of Radish, red Betes, Pine-nuts, and several sorts of Mallows.

§. 15.

Elmont highly magnifies the fore-said Medicine commended by *Paracelsus*, namely *Corallatum dulce Mercurii diaphoretici*; and he adds Milk of Pearl, all which things by their eminent Balsam purge the whole Body, and qualify the innate Spirit of the Lungs, so that it abates of its fury. He does not condemn *Laudanum*. Moreover he says, That a large spoonful of

colcothar boyled in Linseed Oyl, taken inwardly, as it cures all Ulcers, so that of the Lungs.

§. 16.

Ullis uses the three following Indications. 1. To assuage, correct and remove disorders in the Blood, from whence fluxions of the *Serum* do arise. 2. To derive all the Recrements of the Blood (which are apt to separate from it) from the Lungs to the Pores of the Skin, or to the urinary Passages, or to some of the Emunctories, or else to discharge what is gathered in the Lungs already. 3. To fortify the Lungs against the reception of *Serum* and other Humors, and also to guard them against excess of external Cold, whereby otherwise the Lungs might be hurt. For the first, that is, to appease the effervescence, and the subsequent dissolution, making a separation of the *Serum* and other Humors (since for the most part this depends upon some foreign Acid) things that break and correct an Acid are good; namely Diaphoreticks, inasmuch as they expel the superfluous *Serum*; also Aqueous things, inasmuch as they dilute the peccant Acid: for which purpose Pectoral Decoctions are commended. Take the Author's own Receipt.

Take of the greater Daisy one handful, cleaned Snails No. 3. Root of Eringo half an Ounce. Burnet three Drachms, Butcher's Broom two Drachms, Leaves of Ground-Ivy, Spleen-wort, Colts-foot each half an handful, Fenil Seeds half an Ounce, Currans six Drachms, Jujubs No. 6. Boyl them

them according to art in Spring-Water. Sweeten the Decoction with Syrup of Red Poppy.

Also a Decoction of the Wood of *Guajacum*, *Sassafras*, all the Sanders, Shavings of Ivory, and Harts-horn is prescribed by him, as useful. To obtain the second Indication, namely to derive the Recrements of the *Serum* and other Humors from the Lungs, and to get out the tabick Matter, that already sticks in the Lungs, all sulphureous Balsamicks are good to which end he gives about 6 or 10 Grains of the Tincture of Sulphur of Antimony in some pectoral Syrup. He gives also 4 Grains of Balsam of *Peru* in Conserve of Roses, and several other things made with Oyl of Turpentine, and also Preparations of Gum-Ammoniack. The third Indication, namely the strengthening of the Lungs, or the amending of their hurt constitution, is answered by all such things as resist putrefaction, cleanse, heal and strengthen, for which purpose he commends all balsamick and traumattick Medicines made of Sulphur. He therefore advises the taking in the Fume of Sulphur by a Pipe or Funnel into the Lungs. In this case also he advises the change of Air, that is, from the City to the Country, where the Air is more Sulphureous by reason of Dung, and other stinking stuff. He sets much by other Fumigations also, such as these following, viz.

Take of Leaves of Hyssop, Ground-Ivy, white Horehound each two handfuls, Roots of Elecampane two Ounces, *Calamus aromaticus* half an Ounce, Seeds of Anise, Caraway each one Ounce. Cut

and bruise them. Boyl them sufficient quantity of Spring-water. Let the Steam of the Colature be received by a Funnel, Morning and Evening quarter of an hour.

Another made of mere micks.

Take of *Olibanum*, white *Benzoin* each one Drachm half, Powder of red Sanders each one Drachm them. Make a Powder. It be strewed on hot Coals, Smoak must be received Funnel; Or,

Take of Gum-Ivy, Frankincense each two Drachms, Fine Sulphur a Drachm and a half, Mastich one Drachm. Trochiscs with a dissolving Gum Tragacanth.

The Author used these Trochiscs last prescribed in a Consumption when it was beginning. Now he will proceed to his Cure when it is confirmed, in which those Medicines do most good, that cool the Heat of the Blood, that refresh and gently assuage the Animal Spirits, and recruit the emaciated Body; therefore for Food he commends the Milk of a Woman, Ass, or any other Creature, with Barley-meal and Barly-Grewel; and Drink, Barly-Water, and other such; He also advises the use of Pectoral Syrups and Licks, which assuage the Inflammation of the Throat and Lungs, and facilitate Expectoration. The weak Hypnoticks also, in procuring moderate Rest, do sometimes a deal of good.

§. 17.

Et us now see what *Sylvius* says. He divides his Cure into three Parts, namely, for a Consumption beginning, for one already begun, and lastly for one that is summate and past hopes. Therefore his advice is, in this Disease, these Medicines betimes, since a confirmed Consumption is rarely ever cured; and by all means would have every violent Cough quickly stop't, but more especially such as do encline to a Consumption. In a Consumption therefore if it is begun, all the danger lies in the Ulcer of the Lungs, from which *Pus* is communicated to the whole Mass of Blood, whereby is bred not only a lingering, hec'tick Fever, but a mortal Consumption. Now the Cause that maintains this Ulcer is, according to some, a Catarrh, and that sometimes sharp and acid, sometimes mild and watry or viscid; or *Pus* communicated from some other place. At the beginning therefore he cures this Disease the old way, as if there were a Catarrh, and he endeavours not only to divert it, but he also corrects it; that is, when it is sharp, he cures it by Medicines, which temper that Saltness and great Acrimony; for the attaining of which he likewise prescribes Diuretics and Diaphoreticks, to temper the Acrimony of all Humors, which when they are tempered he carries off by Hydragogues; in this respect he likes Issues in the Neck, Arms and Legs, for abatement of the Humors; and he expects the same effect from Errhines and Stercoratories, which evacuate the viscid and redundant Humors by

the Nose, and at the same time divert them from the Lungs. For tempering the salt Humors that fall from the Head, he highly commends *Pilule de cynoglossa, de styrace*, and other such things, but Opiates above all. Moreover he cures a mild and watry Catarrh, by giving a gentle Sweat, or by fuming with Mastich, Frankincense, Amber, *Styrax*, *Benzoin*, &c. For the same cause he also sets a great value upon Decoctions of Roots and Woods; for instance, of *Guajacum*, *Sarsaparilla*, Sanders, Oak, Juniper, &c. But if the Catarrh proceeds from viscid Matter, he says, Incisers and Alterers are good; such as Gum *Bdellium*, *Sagapenum*, *Galbanum*, *Ammoniac*; and Mercurials also, as *Mercurius dulcis*, &c. He commends divers things to divert and evacuate *Pus*, when it is made in the Lungs, and in an *Empyema* he likes Tapping of the Breast. Then for cleansing of the Ulcer, he commends Roots of Elecampane, Birthwort, Leaves of Colts-foot, Scabious, Agrimony, Hyssop, Speedwel, Maiden-hair, Ground-Ivy, Vervein, &c. out of which divers Decoctions and distilled Waters may be prepared; he commends also the taking of three Drachms of *Venice Turpentine* now and then in Syrup of Violets. He also highly values raw Honey or Mede. Yet he prefers Balsam of Sulphur made with Oyl of Anise, Amber, Juniper, Turpentine or Nuts before all other things. Then for healing the Ulcer of the Lungs, he thinks a Decoction of red Roses does far surpass the Conserve, on this score, for that by the Sugar in the Conserve the Stomach and Guts are filled with Phlegm, whereby not only the Appetite is destroyed, but

chy-

chyfication likewise is hurt; all the *terre sigillata*, Boles, roots and leaves of Saracen's Consound, Plantain, Sanicle, Winter-green and other vulnerary Herbs are good. But here it is observable, That our Author makes no great account of Flowers or Milk of Brimstone; for he confidently maintains, That he never found any laudable effect from them. For the Palliation of this Disease he prescribes many generous Remedies, which only mitigate the Symptoms and restore Strength. For discharging therefore of viscid Pus, which usually causes difficulty of Breathing, he advises inciding Medicines, as Decoctions and Licks made of Hyssop, Maiden-hair, Elecampane and the like, for which purpose *Balsamus sulphuris anisatus* is effectual. For the restoring of a decayed Appetite he commends 5 or 6 drops of *Elixir Proprietatis Paracelsi* given in Wine before Meal. Furthermore for reparation of Strength, he says, That besides Meat of abundant nourishment, and drinking strong Liquors and rich Wines, all aromatick things, as Ambergrise, *Confectio Alkermes*, or *de Hyacintho*, are good. Take this Receipt;

Take of Conserve of red Roses made but with little Sugar one Ounce, *Confectio Alkermes* two Drachms, *de Hyacintho* one Drachm and an half, Ambergrise three Grains, *Balsamus sulphuris terebinthinatus* half a Scruple. Mix them. Make a soft Electuary with Syrup of Coral, of which the Patient may take often the quantity of a Nutmeg.

§. 18.

According to *Cartesius* theses Purgers, but mild must be given in the beginning of this Disease, such as Syrup of Marsh-mallows, Rhubarb and Manna; but in the progress of this Disease they will have Bleeding and must be let alone. However, in cleansing an Ulcer in a Consumption, and for healing it they commend the following decoction.

Take of Roots of Liquorice sliced each six Drachms, *Scilla* cut two Ounces, Berries one Ounce and a half, Seed of Sermountain, Anniseeds three Drachms. Boil them in sufficient quantity of water; add to the Colature Syrup of Hedge-Mustard and Symplics each three Ounces. Let the Patient may drink a Draught twice or thrice a day.

They also prescribe decoctions and distilled Waters, *curius dulcis* also is good for the Ulcer, cohobated with Symplics of Wine *Helmont's* way, and *Alum* of Turpentine; and all *moniates*, which are first, prepar'd to dull, and take off the sharp, cutting Particles. Therefore over-much Coughing and spitting, Opiates are very good, as *Theriaca caelstis*, *Theriaca naci*, *Laudanum opiatum*, *Pilula Cynoglossa*, &c. Finally, when the Lungs of the sharp Particles of Pus all hard and ponderous are proper, as testaceous Decoctions of the Woods,

ve the Faculty of imbibing and
ering the sharp Humors, Mercu-
is dulcis also, Bole-Armenick, ter-
sigillata, and several other things
commended, of which hereaf-

§. 19.

Having seen other Men's Opini-
ons, we will now give our
on. Since therefore we have
de formerly the Cause of this
sease to consist in some sharp A-
lodged in the Blood with some
Acidity, at length corroding the
ings, and quire coagulating and
pping the Blood and thereby
raging the Spirits; it will be
orth the labour to do all we can
correct the sharpness and cor-
sive Acidity of the Blood, for
en that is corrected, a Consump-
ion may as well be cured, after it
egun, as in the beginning. Now
efore let us enquire after the
ter of our Remedies, which is
ally taken from three originals,
Diet, Chirurgery and Pharmacy.
a Chirurgeon can do little good
this case: for taking of Blood
m a consumptive Person seldom
es good, and we may well say
h the Poet,

— Non defensoribus istis
Tempus eget. —

ellus cent. 4. obs. 15. is of the
e Opinion, for there he advises
er to infuse more Blood into
sumptive Persons than to take
from them, especially if the
be an obstacle. But when the
case proceeds meerly from a-
ndance and sharpness of Blood,
eding is very proper before there
a corrosion of the Lungs. Hip-

ocrates gives us an instance of this,
l. 5. Epid. cap. 6. who perfectly cu-
red the Man in Oenas, consumed
through abundance of Blood, after
he had tried all other Remedies in
vain, only by bleeding him in both
Arms, till he had lost almost all the
Blood in his Veins. I cured a No-
ble Virgin of such another Con-
sumption, who, when she was no-
thing but Skin and Bones, upon
taking only three Ounces of Blood
from her, began to mend, and re-
covered her Health perfectly by
taking a few Medicines. But we
must go warily to work, for every
one has not such success. Instead
of Bleeding, Issues are good in the
beginning and progress of the Di-
sease: for several consumptive Per-
sons, while their Issue was open,
have been well, who upon the clo-
sing of it, have been ill. In Phar-
macy these things present them-
selves in the first place, which e-
vacuate the peccant and morbid Mat-
ter from the whole Body, and they
are either Vomits, Purgers, Dia-
phoreticks, Diureticks, or Alterers
and Sweetners, which compose
the Spirits, and hinder the coagu-
lation of the Blood. As for Vo-
mits, they are ever suspected in
this case, but if it certainly appear,
that the viscera are not infirm, nor
the Lungs corrupt, if there have
been no spitting of Blood formerly,
and if the Stomach abound with
peccant Humors, especially with
bilious ones, if there be a squeam-
ishness and disposition to Vomit,
they bear the Bell from all other
Evacuators: for more may be dis-
charged at one Fit of Vomiting
than at half a dozen Stools, if the
strength will but bear it, and no o-
ther circumstances prohibit it: O-
therwise Vomits cannot safely be
given

given for fear of breaking the Vessels of the Lungs, and other Symptoms, as *Willis* well advises *Pharmaceut. rat. sect. 3. 13.* As for Purgatives, they likewise are not very safe, because they are not able to carry off the Acid, but rather encrease the Acrimony. Yet in the beginning we admit of them, for the discharging of bilious Particles, which reside in the first ways, provided they be gentle: for they that are inclined to a Consumption, at the beginning complain of a bitterness in their Mouth. We prefer before others Leaves of *Senna*, *Rhubarb*, *Prunes*, *Currans*; especially Decoctions and Infusions made of them, mixt with other Pectorals, which do consumptive People more good than Powders. *Rulandus* in his *Theatrum* cries up the following Potion.

Take of the Leaves of *Alexandrian Senna* one Ounce, *Hyslop* half an handful, *Ginger* half a Scruple, *Sugar-Candy* half a Drachm. Boyl them in a sufficient quantity of Wine. Let the Patient take three Ounces of this every day, till the Body is well purged.

If you meet with one that loves Wine, prescribe him a Thyfick Wine, made of Pectoral Herbs and Roots, and some of the forementioned Purgers. But I often fall upon the Enemy, before I give a Purge, that is, upon the Acid and the peccant Acrimony; for unless this, which is the cause of the Disease, be timely removed, whatever you do, the Patient is undone: And this Acrimony is removed by the use of Balsam of Turpentine, giving ten drops or more at a time,

by which I have cured some the best thing to correct the and sharp coagulated Phlegm troubles the Lungs and is there, and to discharge and fy the residue that is in the Blood, is our Pneumonick made of volatil Spirit of many and oily things. The about five drops, I would have communicated it, as the principal remedy in a Consumption, not afraid, it might fall in the hands of Empiricks, which like Flies in Summer; yet not deny the communication to the Skilful in our Profession. The defect of this our Balsam, if the Patient spit Pus, and the Physician suspect an Ulcer in the Lungs, this following is good.

Take of Balsam of Turpentine *Peru* each one Drachm half, Oyl Olive fresh, of *St. John's wort* each one Ounce. Mix of which the Patient may take half a Spoonful Morning and Evening.

But since Patients in this are always cholerick, which is the reason why they cannot bear these things, this may be remedied.

Take of *Cyprus Turpentine* one Ounce, Honey of *Ros* three Drachms, *Liquorish* three Drachms. Mix them together till the bigness of a Nutmeg in the Morning.

And for this very end I value *solutum Sulphuris*, as *prietatis Paracelsi*, *Wedelin* and *antiphthisica* made of *virgin*

and *Saccharum Saturni* with Vitriol and Spirit of Wine; Or,

of Vitriol of Mars one Ounce, It into an Ounce of Vinegar, red upon red Lead, or into much *Saccharum Saturni* Liquor. Let them stand a Night digestion, afterwards evaporate them. Add of Spirit of Wine, what is sufficient. Make a Mixture, filtre it, and keep it use.

so sweet Vitriol, freed from all Acidity, is good: And this sweet Vitriol, depending upon its use destroys the corruption of Wounds and Ulcers. Likewise *Sulphuris anisatus*, or *terrestris*, or *succinatus* is good, if use of them be rightly understood, especially if the Patient be young; for the skilful *D. Michael* observed that upon using them much, People, have fallen into Convulsions, and hectic Fevers. Salts consisting of alkaline, volatile parts are good in this case, because they imbibe and correct the vitriol Acid; yet here we must be cautious. Antimonial Sudorifics are either proper, which are fixt, either Purge nor Vomit; such as *Stimulium diaphoreticum*, *Bellum minerale*, &c. *Helmont's* Mixture also made of Mercury is which is sweetened by Frequent cohobation with Spirit of Wine. Those Hawkings and Spitting that are raised out of the *arteria* and the Lungs (of which Patients complain so much) arise from a Sharp Acid, which predominates in the Blood and about those Parts, are best cured by things that soak up the Acid, such as the *Antihellicum* and

Stomachicum Specificum Poterii, *fecula Bryoniae*, *terra sigillata*, Boles, Crabs-Eyes, red Coral, Dragon's-Blood, Myrrh, and many more things besides. This may serve for a Prescription;

Take of Crabs-Eyes prepared, Coral prepared each one Scruple, *Antihellicum Poterii* half a Scruple, *Pulvis anonymus*, Flour of Brimstone with Myrrh each one Scruple, Pearl prepared fifteen Grains, Sugar-Candy what is sufficient. Make it either into Powder, or for nice Constitutions, make it into Trochiscs.

I think it best to abstain from violent Medicines and Alkalines. A Decoction of red Brazile-wood is found proper to temper the saltiness of the Blood, and *Serum* in such as spit Blood and are Consumptive: Or you may use the following Decoction;

Take of the Roots of Smallage, Lovage, Colts-foot each one Ounce, rasped *Guaiacum* three Ounces, Leaves of Colts-foot an handful, Flowers of Mullein two Pugils, Raisins of the Sun four Ounces. Boil them in a sufficient quantity of Spring-Water; to two Quarts of the Colature add of Syrup of Jujubs two Ounces.

Waters which come off Sulphur are good. For I saw two Persons cured by them. When the Disease is confirmed, and the Patient is very lean, Milk (let some People say what they please) is the last Refuge: for by the serous part it is not only absterfive, but corrects the Acrimony of the Blood; by the caseous Part it consolidates; and by the butyrous

Part it heals and smooths. And it must be given in the Morning fasting three or four hours before Meat, newly milked; from four Ounces to seven; and again in the Evening as you please, and the Patient can endure it (that is, according as we find the Strength encrease) always adding a little Sugar or Honey, that it curdle not and turn sowre on the Stomach. Woman's above all others, as it is most agreeable to Humane Bodies, does most conduce to the recovery of the Patient; for it is more subtil, penetrates sooner, and nourishes better than any other. Next to this, Asses Milk is most proper for a Consumption, as *Trallianus lib. 12. c. 4.* says: for it is reckoned to be cooler, moister and thinner, and not so apt to curdle as others. And it is easie of Digestion; which *Avicenna l. 4. tr. 2. c. 6.* confirms, where he says, That next to Woman's Milk there is none so good for Heetick People as Asses; for it cures an Heetick perfectly, if it be curable. Goats Milk also is good for a Consumption, but that it is too astringent. When I wrote this I had a Consumptive Taylor under my Cure, who was very much out of order and hot upon his drinking Goats Milk: but he found Cows Milk more agreeable and cooling. And I can impute this alteration to no other reason, but that he had been most used to Cows Milk. In a Milk diet this must be observed, That no virious Acid be lodged in the Stomach, but, before any Milk be drunk, it must be got out thence by Absorbents; otherwise the Milk will curdle, and do more hurt than good. Also if there be a putrid Fever and a Looseness, Milk is naught. And the Creatures

which give the Milk, must be with young: They must be with good balsamick and sweet Herbs. The drinking of Milk must be continued at least for Months. There are many Medicines also which inwardly cool and off the Acrimony, and such as Leaves of Endive, Speedwel, Lettuce, Colts-foot, Thea, Chickweeds, Flowers of Roses, Violet-Lily, the four great Seeds, and all the Sanders; and divers Medicines may be used which shall give you some profit which will take off the Heat and also cleanse and heal the Blood. But you must have a care not too much cooling, you must not the Blood, nor stop the Motion, and so hasten the death.

Take of *Sarsaparilla*, Roots of Colts-foot each one Ounce of Brooklime one Pound, Speedwel half a Pound, Colts-foot half a Pound, Wall Rue, St. Winter-green each half a Pound, Water of Sanicle one Pound, an half, the best Cinnamon an Ounce. Shred these and fuse all with the Spirit of Ox newly taken out, and Liver sliced, red Snails, green, for sixteen hours, then according to art, add of Cinnamon Water one Ounce and an half, Pulverized with *saccharo* four Ounces them.

We use also to defill off Oysters, Snails, Frogs, with Swine's Blood, which is beneficial. If the Ulcers of Lungs be new made by

it may easily be cured with
aries, especially with Pow-
Crabs-Eyes. And this is
Tachenius de morb. princip. says.
eds of the Lungs, which come
an external cause, and through
ault in Digestion, may be
ly cured with vulnerary Po-
but not Ulcers, when they
ed from a decay of innate
h and radical moisture. Or
may use the following Deco-
which check the Acid, that
the Pus in the Lungs.

of Root of Liquorish one
ce, Dandelion, Colts-foot,
ontra each half an Ounce,
ves of Scabious, Daisy, Colts-
noble Liverwort each one
lful, Flowers of Scabious,
y, Colts-foot, Trefoil each
Pugils. Boil them in a suf-
ent quantity of Common Wa-

Add to the Colature of Sy-
de duabus one Ounce. Mix
n. Let the Patient take a
ught three or four times a

have given the following
to nourish such as were weak,
good success.

of Shavings of Harts-horn
Ounces. Pour to it of
ing-Water three Pounds, of
Wine half a Pound. Digest
in a Vessel well stopd for
ve hours in a warm Place,
add of fresh root of Scorzo-
half an Ounce, Cichory two
chms. Set it by in the Cold
Glas, that it may gelly. Thus
Head, Feet, Bones, &c. of
mals, which yield a Gelly,
good in a Consumption.

But when we find a great Heat
of Blood in consumptive Persons,
Emulsions made of the four greater
and less cold Seeds; sweet Almonds,
are good to allay it. To take away
the Cough, which is the most ur-
gent Symptom, these things are
good, *loboch farfarae*, of Fox Lungs;
with Absorbents, such as Amber,
red Coral prepared, *Antihæsticum*
Poterii, prepared Pearl, *Species dia-*
tragacanthi frigidi, adding a little
Landanum opiatum, whereby the
sharpners of the Rheum, and the
Cough may be stopd. Yea, the
most experienced *Ettmullerus* testi-
fies that after the use of Opiates
consumptive Persons have often
found themselves better, *Disp. de O-*
pium vi diaphoreticâ cap. 1. §. 15.
These are his Words, certainly in
Consumptions of the Lungs People find
sensible benefit by Opiates, rightly ad-
ministred, for thereby abundance of
Filth is abated, not by suppressing it,
but by preventing the breeding of it
a-new continually; and being come to
a better consistency, it is the more ea-
sily expectorated. And I have often
admired how consumptive People
could bear the constant use of Opium
so long, yea for several Weeks, without
any sensible harm or remarkable alte-
ration: As *Crollius* likewise has
long since observed in his *Basilica*
Chymica. And they are the more
grateful, because they procure Sleep,
when it is much wanted. As for
the stopping Colliquative Sweats,
and loss of Seed, astringent Pectorals
are good, such as *Saccharum Satur-*
ni, *Vitriolum Martis*, *Antihæsticum*
Poterii. But the best Remedy of
all in this case is *wedelius* his Anti-
hæstic Tincture, made of *Saccha-*
rum Saturni, *Vitriolum Martis*, &c.
before mentioned: For it present-
ly stops excessive Sweating and loss

of Seed, so that we pass by innumerable other Medicines, which are to be found in Books of Practical Physick. Besides the Remedies already enumerated, *sympathetick Cures* are often used in this Disease, the manner of whose operation, though it be obscure, the use of them is however sometimes successful enough. And this Mystery may in some measure be understood, from what the famous *Comenius* says, in *synops. physic. c. 10. in Append.* namely, That this proceeds from the consent of the Spirit that is in the Body, with that which sticks to the separated Matter, as he endeavours to make out by five Instances; the principal of which is, that sympathetick Cure, wherein the Wound it self is not cured, but the Weapon that gave it, or a Cloth, Wood or Earth dipt in the Blood, is anointed with the Salve, and yet the Wound closes and heals. *Hartman* has this Experiment following; Take an Egg, boyl it in the Patient's Urine, and then put it in an Ants nest, and let it ly there till the Ants have eaten it up. To which I may add another, imparted to me by a Nobleman; Dip a linen Cloth in the Patient's purulent Spittle, hang it in the Chimney, where the Smoak perpetually goes up, upon doing whereof, by a wonderful Sympathy, perhaps arising from consent of Spirits, it is found, that wonted Nutrition ensues, the Ulcer being healed by virtue of the Smoak. These Empirical Medicines are known to have worse success; first of all the Liver of a Wolf and an Otter, which an illustrious Person keeps as a great Secret; a Drachm of it must be taken in Powder for nine days. Another; Put Common-Salt into a piece of

Alder-wood, then burn it. Patient take the Ashes for in some convenient Vehicle let the Patient every Morning take a new Egg, laid by a Hen, and continue this a Month or longer. Among these we may mention *Cardilucius* his Medicine, of Horse-radish and Honey mixed together, whereby he boasts he has cured many. All consumptions in a manner approve of Roses, but I like it not because of the Sugar that is used as I hinted before. *Cardilucius* powdered, and mixed with Sugar is good. Dry Flaxseed by eating of which I remember *chant's Son* recovered and *B. Beinson* that good Soldier, before he died, imparted to me an excellent Remedy, the Root of *Aron* mixt with Flowers of Sulphur. So the eating of Daily bread in Butter is counted good, who is able to reckon upon it. I follow the External Remedies which are of use in a Consumption. Therefore beside the already mentioned, I mention to heal the Ulcer: The Root of a Decodion of vulnerary (wherein there is an extract of Turpentine to take off Acidity by the use of *alkali*, wherewith it is impregnated) may be used in the Mouth by a Tobacco Pipe. *Dr. Bennet's* way, by a Root of *Dorel*, an experienced Physician at *Frankford*, told me being asked, That he had cured a Consumption by this way. For the sake of young Physicians I shall give you the Receipts;

Take of Root of Birchwood
foot each half an Ounce

three Drachms, Raspings of
 juniper-wood one Ounce and
 half, Leaves of Hyssop, Speed-
 well, Scabious, Lungwort each
 an Ounce, Mallow, Marsh-
 mallow each two Pugils. Boyl
 in Spring-Water, and
 while the Decoction is hot, let
 the Patient receive the Steam
 it comes from it. Or,

one Ounce, *resumptivum* half an
 Ounce, *crocus Martis* three
 Grains, Oyl of Anise, Fenile each
 six Drops, Turpentine half a
 Scruple. Mix them. Put them in
 a Pot, to anoint the Breast.

To anoint the Chine or Back-
 bone this following is good ;

Take of *unguentum Resumptivum* ;
 Oyl of Frogs, of Worms each
 half an Ounce. Mix them.

We make Issues also with good
 success. But if none of these things
 be available, we must have recourse
 to insusory Chirurgery, as to the
 last Remedy. *Ettmullerus* advises to
 make Infusion of an Essence made
 of vulnerary Herbs and Sassafras-
 Wood, with Spirit of May dew.
 Or let transfusion be made of a heal-
 thy Man's Blood into the sick Man's
 Veins. Also in a desperate case, if
 the Disease have its rise from plenti-
 tude, tapping will not be amiss, if
 the Patient be strong and couragi-
 ous, and have a mind to leave no-
 thing untried. *Van Horne* in his
Microtechnie, shows the way of it.
 Travelling also for change of Air
 and Diet is advisable: for I knew
 three cured of this Disease by so
 doing. The famous Doctor *Syden-
 ham*, my good friend, commends
 Travelling.

of Root of Colts-foot one
 ounce, Frankincense, *nigella*-
 seed each one Drachm, Turpen-
 tine boyled, dried and powdered
 a Drachm, *Styrax* one
 Drachm, Cinnamon half a
 Drachm. Make a Powder for a
 Spoon; or make Trochiscs with
 Filage of Linseed and Marsh-
 mallow-seed, and put them on
 the Sore.

among Externals I highly va-
 lue application of the follow-
 ing to the Breast;

of odoriferous yellow Wax
 one Ounce and an half, the best
 Turpentine six Drachms. Melt
 on the fire, then add of
 Turpentine two Drachms,
 Resin half a Drachm. Mix them.
 Make a Plaster according to
 the Art. Or,

of *unguentum rubrum potabile*

C H A P. V.

Of Spitting of Blood and Apostems, called Empyema and Vomica.

§. I.

Hitherto our consideration has been about a Disease, in which Blood is gathered about the *Pleura*; now we will proceed to the consideration of one, where the Blood is cast out of the Vessels of the *aspera arteria*, and for the most part, of the Lungs. It is called *Hæmoptysis, cruenta sputio*, or spitting of Blood, and it is all manner of voiding of Blood at the Mouth, generally evacuated out of the Branches of the *aspera arteria*, that pass to the Lungs; as in a *Vomica* and *Empyema*, there is usually a bringing up of purulent Matter at the Mouth. The first of these is frequent enough, and the Blood, that is got out of the Veins, is sometimes voided with a gentle Cough, and sometimes without: for the sanguiferous Vessels are divided into many small capillary Branches, through which the Blood is carried very rapidly, and so, because of its Dilecrasy, and too great Effervescence ensuing thereupon, may open the Mouths of the Arteries,

make a Breach, and efflu-
nuity; which being done
of Blood must of necessity
Besides, this Disease is
of many bad and tedious
and proves the beginning
sumption, *Empyema* in
Blood indeed may be
the Mouth, and come from
Parts; namely, from the
the inside of the Lips, Pa-
late, Tongue, *uvula*, *pharynx*,
arteria, Tonsils, Lungs, &c.
the *aspera arteria*, *Womb*,
mach, Liver, *Pancreas*,
Womb, &c.

Names.

But we are here minded
of that voiding of Blood
proceeds from the Breast,
which Hippocrates
29. s. 3. calls *ἁίματος ἐκ τῆς
τήτης* spitting of Blood, and Galienus
*med. ἁίματος ἀπὸ τῆς
θήτης* Blood; others call it *cruentum
sputum sanguinis*, *hemoptoe*,
sio, *cruenta per os regurgitatio*.

Difference.

ere we must observe carefully, distinguish well, whether for-
 the Patient used to bleed at
 Nose: For from thence it of-
 runs into the Stomach, Throat,
 and sometimes into the Lungs,
 then it grows thick and turns
 clots. If therefore any one spit
 ed, and used not to bleed at
 Nose, it must necessarily come
 some Part below, which may
 known by particular Signs, as
 hereafter be seen in the Dia-
 ticks. For the differences of
 ings of Blood must be duly ob-
 ed; the Blood owzing into the
 ex, does after a little titillation
 e *aspra arteria*, arise into the
 th without coughing and insen-
 ; but if the evasation be out
 e Lungs or other Parts of the
 st, then frothy Blood is void-
 y Coughing; if out of the *plex-*
 the Vessels, then it is voided
 ss quantity, at certain times,
 mixt with coagulated *Serum*;
 e of the Stomach or *Pancreas*,
 there is squeamishness, and it
 ided as it were by Vomiting,
 out Coughing.

Empyema.

n *Empyema* is called an Apo-
 , or corruptly an Impo-
 ne, and differs from spitting of
 d, because in an Apostem
 Pus is brought up without
 nt Coughing, in the other
 Blood. Again, an *Empyema* is
 privately in the Lungs or in
 other Part of the Breast, and
 er it nor a *Vomica* show them-
 s, till they kill the Patient, as
 s *Seff. 1. cap. 2. de pulmonis V.*
 has observed, as well as I.

Likewise an *Empyema* usually follows
 a Peripneumony and Spitting of
 Blood. So we have known sever-
 al, who, upon the breeding of a
Vomica pulmonis insensibly, its ripe-
 ning and then breaking, have spare
 abundance of ferid Pus for several
 Weeks, yea Months; and at length
 being thereby weakned have died
 Consumptive. For when a Suppu-
 ration is raised by an Inflammation
 about the *Pleura*, and at last the
 Apostem breaks, the Pus that falls
 into the Breast, breeds this Disease,
 and by long continuance there, it
 stinks filthily, and therein differs
 from the Spittle which is raised in
 a Peripneumony or a Consumpti-
 on. This is confirmed by what I
 lately observed in an Imperial Soul-
 dier, who grew Empyemick af-
 ter he had been shot through the
 Breast; during the Disease, he was
 troubled with straitness of Breast,
 and difficulty of Breathing, and al-
 so with Spitting; when he was
 near Death, he rattled exceedingly.
 When we opened his dead
 Body, in the Cavity of the Breast,
 and indeed on that side where the
 right Lobe of the Lungs is, we
 found eight pounds of ichorous, pu-
 trid and stinking Matter, which was
 not yet turned into Pus. There-
 fore one might very well call this
 a watry *Empyema*. This also there
 was observable, that one Lobe of
 the Lungs, through which the Bul-
 let had passed, was healed to a won-
 der in six days, as if it had been a
 new piece of Lungs; but the other
 Lobe continued still hurt and per-
 forated, undoubredly because of a-
 bundance of putrid Water, that
 stagnated there.

Vomica.

By a *Vomica* they mean Blood insensibly gathered, not in the substance of the Lungs, but in a membranous Bag, at length turned to *Pus*. *Sylvius* takes that for a *Vomica*, in which the glandulous Tubercles, be they greater or less, together with the Lungs, turn to *Pus*, and are contained in a Membrane of their own, all which by degrees tend to suppuration, and then to a Consumption.

§. 2. *Part affected.*

THE Part affected in this ternary of Diseases, is sometimes the *Parenchyma* of the Lungs, sometimes there Vessels, and sometimes the Membranes or Vesicles of the Lungs, which are either opened, or burst, or eroded, or so rarefied, that in an *hemoptysis* (in which we take every sanguiferous Vessel for the Part affected) the thinner and more serous part of the Blood may owze through the Coats, also the Blood Vessels about the Ribs. And in an *Empyema* and *Vomica* you shall ordinarily find purulent Matter about these Parts, in such as have died of this Disease.

§. 3. *Diagnostick.*

NOW that we have considered the Part affected, let us hasten to the Diagnostick; where first of all we must take notice, That Signs of a sharp Blood always preceed this Disease, that is, Heat, Thirst, Itching, and other such things. If the Spitting of Blood preceed from the Gums and Mouth it self, the Blood is of a fresh co-

lour, but little in quantity without Coughing; the Continuity is here often to Sense. If it proceed from the Jaws or *aspera arteria*, the Blood is got up by Heat by Coughing; and Solution of Continuity appears in the Gums if the Tongue be depressed with a *Spatula*, or any other such Instrument. If Blood comes from the Head, it has first been asked, there has been a swelling of the Ears before, and there is an Effervescence and motion of Blood, as you see in Fevers. In my self in an Ague often spare a little without any suspicion of Consumption; for in the morning up, one may easily know, if it come from the Head. If it come from the Lungs, the Blood is frothy and thin, then it is always brought up by Cough, but without pain at Intervals. Whenever it is voided upon the breaking of a Vein or Artery, it comes in great quantity, without any Cause observable, and is known if it were by Vomit, so that the whole Basons are filled with it if it come from erosion of the Lungs, which is distinguished by a sharp Humor and the cingent Membrane, and comes by degrees at certain intervals, and not in such quantities, unless, as was said before, a great Vein or Artery be broken for then it is voided in great quantity and usually kills the Patient, as was observed in two Maids. It may proceed from the *aspera arteria* comes with a little Pain and is brought up red and frothy but a little of it. But if it

in the Stomach, it is without coughing, and rather by Vomiting, it would be in great quantity, that it is brought thither from the Parts, and is kept there a while, by reason of its grumescence, ere it be voided. If it come from the Liver or Spleen, or lower Parts, a dull Pain uses to afflict the Parts, and the Blood is brought up by Vomiting. It is a hard task to distinguish from each of all the foresaid Parts the Blood doth come, but here the Difficulty is surpassing: for the Difference can never be exactly known by certain Signs. This indeed I think is evident, That Blood charged into the Stomach, by the Liver and Pancreas, is grumous and turning to black; such as a Citizen of Hanover voided, which being so qualified the Physicians there did not look for the *parenchyma* of the Spleen, ridiculously and ignorantly enough, blaming the Laxity and Distension of the *vasa brevia*, through which this *viscus* might come to the Stomach: but since a Citizen a little while after was troubled with the like Excretion of Blood, and notwithstanding is alive, and troubled with the same, undoubtedly we must judge otherwise. Now and then also Blood is spit up, through the opening only of some very little vessel, as it happens in a hot course of Diet, and then it is voided in a small quantity at the beginning, and is thin and red. But if it come by Spitting, mixt with Pus, and attended with a violent and frequent Cough, it is a sign of a Consumption, concerning which see the Chapter foregoing. As therefore the voiding of extravasated Blood by the Mouth is easily ob-

vious to sense, so to know certainly the place, whence it comes, is a hard task, and few there are,

quos equus amavit
Juppiter, ac ardens evexit ad aethera
virtus.

These were the Signs of an *hemoptysis*, now we will briefly consider those of an *Empyema* and a *Vomica*. An *Empyema* or Suppuration is so called from the Pus, in which abundance of purulent Matter is brought up by Coughing, there is difficulty of Breathing, and it usually follows a Pleurisy, or Quinsy, or *Hemoptysis*, or a Wound of the Breast or a Blow. This cut-throat carries his Weapons concealed, hoarseness also attends it, Patients find an oppression in their Breast, a Fever never leaves them, the Pulse is quick, the Appetite destroyed, the Pus that is voided, stinks (wherein it differs from the Pus of consumptive Persons) the Eyes are hollow, the Cheeks red, especially three hours after eating, the Nails are crooked, and sometimes the Feet swell, which and other Signs of *Empyemick* Persons *Hippocrates* l. 2. de progn. does excellently delineate. In a confirmed *Empyema* a fluctuation of the purulent Matter and a sense of trouble upon the Motion of the Body is perceived: for the Patient cannot well lie on both sides. Sometimes he can get no sleep, but is thirsty and disquiet all over his Body. The Signs of a *Vomica* are commonly the very same with these; yet at first they are private, so that Physicians can have only some suspicion. But always, as I said before, Acrimony of Blood preceeds these

Diseases, which may be gathered from many Tokens.

§. 4. Causes.

AND now the Causes come under our consideration, the knowledge of which is most necessary for Physicians: because when they know these, they can better give Remedies good against the Disease and its Causes. *Fernelius* says excellently well, *L. 1. Pathol. c. 11.* Diseases without the knowledge of their causes can neither be prevented, nor successfully cured. But the search of them is here very intricate, and clouded with many difficulties. Because among so many different Judgments, a Man knows not whose to follow.

The old *Galenists* Opinion about the Cause of an *Hæmoptysis*, or Spitting of Blood, is, That generally it is caused by too great quantity and Acrimony of Blood, whereby, they conclude, the Mouths of the Vessels must necessarily be opened. And they prove this by the good Habit of Body, which breeds Blood, immoderate use of hot Meats and Wine, suppression of the *Menses* and the like. And they will have this Blood to come out, either by *anastomosis*, or *diæresis*, or *diabrosis*, or *dispedesis*. An *anastomosis* may easily be caused by abundance of Blood, or by its thinness and watriness, as by all things which kindle and enflame the Blood, such as are running, leaping, riding, and the like violent Exercises and Motions. Wherefore the Ancients do blame violent Coughing, laborious Vomiting, loud Crying, Anger and other Heats of Mind and Body, as remote Causes of this Disease: for they say, That

by these things the Blood may be heated and attenuated. Orifices of the Vessels may be opened, and so it may be vasated. The Ancients say it to be a *Diæresis*, when the Vessels are perforated, cut, or burst, which Solutions of Continuity are called Punctures, Contusions or Ruptures. *Diabrosis* they mean this case, when the Vessels and Lungs are eroded by sharp things, whether by Meats, Medicines, Drink or Catarrh fall from the Vessels upon the Organs of Respiration. They mean a *Dispedesis*, when the Coats of the sanguiferous Vessels are so rarefied, that a thin fluid such as a choleric, and for a serous or watry one is, may pass through them; but the Ancients confess that spitting of Blood does not come this way. Their Cause of *Empyema* is Pus filling the Cavity, doing much harm by its quantity and Acrimony: they hold that it comes from the breast, or some preceeding Apoplexy, Quinsy, Peripneumony, &c. they say it may be caused, namely, if these Diseases be followed by suppuration, and the Pus be run into the Cavity of the Chest, or if crude Swellings be broken on turned into a Pus. They hold also, That an *Empyema* may be caused by a Catarrh falling on the Breast, and not proceeding from Spitting within fourteen days. They believe also that Matter may come from somewhere else, as from the *Uterus*, and may get thither by the Passages; and they have the Reason for it, That in *Hydropneumony* the same Serum finds its way into the Chest, and then the Breast swims with serous Matter.

§. 6.

Helmont wholly ascribes the Cause of these Diseases, to the Pulmonary *Archæus*, enraged either by the Blood, being burthensome both in quantity and quality, or by *Pus*. Now if the Excrement be not expectorated, but hardened, then occasion is given to an occult *Vomica* or a Consumption, as *Helmont's* zealous Disciple, *Grembs in Arbor. ruinos. l. 2. c. 1. §. 9.* and *Helmont* also himself in *tr. delirament. catarrh. p. 275.* do say. At length the Air does further dry the oppilating Mucilages, after which new products appear, which in process of time contract Acidity, Acrimony and Malignity, whence come these doleful cases, *Vomica*, Erosion of the Vessels, Spitting of Blood, Consumption and Death.

§. 7.

Ullis places the Cause of these Diseases in the Acrimony, Dyscrasy, and too great Effervescence of the Blood, which open both the pneumonick Vessels and the tracheal Arteries, and so dissolve Continuity: for the Blood being sharp, and gathered principally about these Parts, may of it self easily open the Mouths of the Arteries, and eat through them, and so cause a spitting of Blood. And sometimes Blood that is too thick and apt to coagulate, when it cannot readily be received by the Veins, must of necessity run out, as we see it does in the Scurvy, pestilential Fever, Small-Pox and Poyson. And thus spitting of Blood arises from the Bloods being either too thin or too thick. An hereditary

§. 5.

Now let us consider the Chymical genealogy of this Disease. They blame in this case, sharp, corrosive Salts, destitute of any mixture of more benign and mild ones, which predominate in the Vessels of the Lungs, corrode the tender Membranes of the pneumonick Veins or Arteries, or open them, and so produce pernicious Inundations of Blood. For, that such sort of Salts are actually in the Bodies, they demonstrate by several Experiments, which my Business will not allow me further to insist on. But as to an *Empyema* and a *Vomica* they maintain that of this kind of Ulcers come, when a separation is made of the Salt of the internal Liquor, or of the Balance which preserves each Part from dissolution, adding, That in the spreading of *Pus*, the Sulphur, which should be coagulated, is kindled and dissolved.

tary indisposition of the Lungs contributes very much to this Disease, according to our Author. Among the more remote causes he reckons the suppression of the *menstrua* or of bleeding at the Nose, or any other way, excess of Heat and Cold, &c. for when the Blood is too hot, and when transpiration by the Pores of the Skin is stopt, then it rages more violently, and often bursts out of its Vessels, upon which presently there follows an *Hæmoptysis*. So if it turn into purulent sharp Matter, then an *Empyema* or *Vomica* breeds.

§. 8.

Sylvius, the Glory of *Leyden*, blames the breeding of too much fluid Bile in spitting of Blood, which is too sharp; and when mixt with the Blood, causes a greater effervescence, and opens the sanguiferous Vessels of the Lungs, whether they be opened by a too great distension of the Vessels by the abundance, rarefaction or retardation of the Blood, or by wind, or by contusion with some hard or sharp thing, or any other way. And in a *Vomica* and *Empyema*, he blames the great quantity of Blood, falling out of its Vessels into the cavity of the Chest, and because of its Acidity there turned into Pus.

§. 9.

Cartes and his followers, think, that this Inundation of Blood can arise for no other reason, but that the subtil Matter has communicated a different Disposition to the Blood; for all preternatural Effervescences and Commotions of the

Blood arise from that. When they take all Particles, which either smite, or corrode, or prur, or provoke, and so make the Blood dissolve Continually, when they are enraged with this preternatural effervescence, to be the cause of this Disease. In a *Vomica* and *Empyema* they will have purulent Matter to be the cause, and they describe a dull pain, which afflicts Persons with this Disease, from the Malignity of the Matter, that lies upon the Lungs, which are but very few in the Lungs.

§. 10.

NOW having considered the Mens Opinions about the causes of these Diseases, that they may be the more clear, we give you our own. We ascribe the cause immediately to the violence of the Spirits, which move the Blood about, and excite it when it is too sharp. Our Opinion is like a Water-work or Engine, which is moved by the Liquor within it. *i. e.* the Blood, as the excellent *Isacius* chief Physician of *Wittenberg*, my ingenious friend, who has erected an eternal Monument to his Name, by exposing his *Eloquentia* to the Learned, has demonstrated this Motion to the Eye, the perfection of the Engine, and the Motion of it are good or bad according to the diversity of the Blood, arising from the Fermentation and Particles of the intestine Motion and Appetite (which we call Fermentation) of the Particles, that make up the purple *Nectar*, is governed by a twofold Salt, an acid and a vitil *Alkali*, by the concurrence of which being dissolved, and

thing one upon the other, the rest of the Particles also are too much moved and agitated. For the mutual Action of those two Salts one upon the other, may be seen with our Eyes, and is manifest enough. When this is kept within due bounds, all goes well, but when it is disorderly, then alas, what innumerable effervescences, what storms and inundations immediately fall upon our Bodies! But how calm, how safe is all, when the Blood is appeased and amicable, when the vital Ferment in the Heart, impregnated with vital Spirits, is in good order! This Ferment, the excellent *Ettmullerus* shows to be indicated in that point of the Egg, which is salient, because of the saline volatility of the animal Spirits: and he proves, That as in the Kitchen of Chylification the chief Cook is of an acid volatil Nature; so in the Work-house of Sanguification and Fermentation renewed in the Blood, the Operator is a volatil and pernicious Salt. And, to say all in a word, I am of the very same mind with *Ettmullerus* before said, that the disposition of the Blood depends upon the condition of the two Salts, a volatil Acid and Alkali. For the saline virtues that Fermentation and Circulation of Blood, as Baker's Leaven raises the Dough and makes it porous. I thought fit, by the way, to say something, how the Fermentation of the Heart is performed in a natural state, that it might be better understood how it is spoiled in a preternatural one, since controversies compared illustrate one another. These things therefore supposed, it is plain, That the Blood may be made either too sharp or

fluid, because the fermentation is spoiled, or through some defect of one or the other Salt. It is therefore most assuredly true, That spitting of Blood, if not always, yet for the most part, proceeds, either from too great fluidity of Blood, or abundance of *Serum*, or from a Salt both volatil and sharp, which not only puts the Blood into fusion, but rends, pierces and eats through the containing Vessels, and by its sharp Particles in process of time, tears the little Fibres of the Arteries and Veins more and more, and makes further breaches. Continuity also is dissolved by too great Motion of the Blood, (whence soever that proceeds) whereby the Blood bearing too impetuously on those or these Fibres, and they not giving way, breaks the texture of them. Continuity also is dissolved, when the Blood is carried violently at one push through Vessels that are of a tender frame, or too strait for so much Blood, and dilates the Fibres, and so it gushes out at the breach. Without doubt therefore we may reckon the Enemy's head quarters to be about the pneumonick Vessels, whence the Blood, stimulated with these Provocatives, and got out of its enclosures, enters the cavity of the Lungs chiefly, like a head-strong Horse, and since it raises trouble there, irritates the Fibres and solicits them to eject it: if it be not timely discharged thence, it cannot otherwise chuse but grow sharp by continuance there; and so the Spirits, that should temper the rest of the Particles, must be dissipated, which is the reason why, upon the dissolution of the Sulphur also by the great acidity, that destructive stench

stench arises in an *Empyema* and a *Vomica*. And in what Diseases an Acid begins to prevail, the volatil Particles ever and anon flying away more or less, and heterogeneous ones thereupon coming in their room, *Empyema's* and other Abscesses must arise thence. For it is manifest from what we said before, that *Pus* is bred of a medley of several things, which by continuance do contract still a more and more acid Ferment, and upon combination of this with the Sulphur, it at length grows white. We, as well as *Sylvius*, *Helmont* and *Paracelsus*, do blame an Acid in *Pus*; and Blood is not concocted into *Pus*, as the *Galenists* were of opinion: For no Man dare say, That red Blood taken by venesection, though never so much concocted or boiled by the strongest fire, will ever turn to a white Matter, such as *Pus* is. Therefore, to be brief, we derive an *Empyema* and a *Vomica* from sharp and acid Blood, turned into *Pus*, and gathered in the Cavity of the Breast.

§. II. Prognostick.

NOW in order we come to the Prognostick, where we will search what hopes there are of the Patient's safety. But we will carry *Seneca's* advice along with us, *lib. 6. de benef. cap. 16. That a Physician ought to be concerned for his Patient, and for the Credit of his Skill, which undoubtedly is at stake, when an unhappy Prognostick puts the Physician to the blush.* All voiding of Blood therefore upwards, according to *Hippocrates l. 4. aph. 25.* is reckoned bad; so he observes, That this Disease is familiar to young People, *sect. 3. aph. 29.* And

in another place he mentions frothy Blood coughed up from the Lungs, *sect. 4.* An Ulcer of the Lungs has danger in it, because Suppuration and a Consumption must be expected: for the Lung is very difficult to heal, because of continual Motion. Moreover this spongy Part, such as the *Vesicles* are, the corruption not only faster, but it easily passes from the Vesicle of the Lungs into the Lungs, so constituted, that by day be more and more increased; Respiration hindered, encrease, and the Body wasted. According to *Juvenal Sat. 1.*

— — — *Grex totus
unius scabie cadit & porrigine*

For it is not so bad, if upon breaking of an Artery or a Vein in the Lungs, the Blood be spit presently; as if it fall upon the surface of the Lungs, be kept there, and so cause an Inflammation; then after long continuance, the spirituous Particles flying off, if it should putrefy and at last corrupt and exulcerate the surface of the Lungs. There is little danger from the breach of a small Artery in the Lungs, upon which the Heart must necessarily be supported by the abundance of Blood. For sometimes the Blood is poured out in such places, even whole Basons, and great vessels are filled with it in a short time, and the Patient, as in *Virgil*,

— — — *crassum vomit ore cru-*

a moment pours out his Soul,
with the Blood its seat, as appears
from the German *Ephemerides*, Ann.
p. 309. Spitting of Blood fol-
lowing spitting of Pus threatens
danger: For it betokens an Ulcer
in the Lungs, of which abundance
have died, according to that of the
Poet;

*nis ut è molli sanguis pulmone
remissus
Ad Stygias certo limite ducat a-
quas.*

But if the Blood come out of the
Chest, and it be agreeable to the
Age, Climate, Constitution,
and Season, the Disease is not so
dangerous: for in young Women
have observed spitting of Blood,
upon the suppression of the *menfes*,
which ceased upon their coming.
The spitting of Blood for a conti-
nuance, and which will not yield
to proper Medicines, turns to a Con-
sumption, as lately I observed in a
young woman twenty Years old, who was
troubled with spitting of Blood, and
with heaviness of Heart, a
Cough, and other very ill Signs, she
at last fell into Consumption. But if a va-
riety of ordinary or scorbutick Person spit
Blood, the case is more dangerous,
if one stronger and not scor-
butick should do so. In a word,
Wounds of the great Vessels of
the Lungs are usually mortal, but
Wounds of the less, and of an Em-
pyema are often cured, as *Sylvius*, c.
1. §. 44. testifies. Neverthe-
less we need not always fear spit-
ting of Blood, since now and then
it preserves the internal *viscera*, as
the Liver, Spleen, &c. As one says,
spitting of Blood is often critical, and
sometimes it delivers from great Di-
stresses. Vomiting of Blood also with-

out a Fever is wholesome; but
with a Fever it is accounted a per-
nicious Sign, according to *Hipp.*
sect. 7. aph. 37. But a Hiccough or
Convulsion after Bleeding portends
ill. Blood which owzes out of the
trachæa often portends no ill. Also
a violent Head-ach according to
Hippocrates is sometimes cured by
bleeding at the Mouth. Thus much
of the Prognostick in an *hæmo-
ptysis*.

Our divine old Man reckons up
many unlucky signs in an *Empy-
ema*, that is, that it usually kills in
seven days, and those that escape,
become purulent. But they that are
empyemick after a Pleurisy, ought
to be purged within forty days af-
ter the breaking, and then they are
safe, otherwise if it stop, they grow
consumptive. If they be scared or
cut, and the Pus run pure and
white, then they escape. If the
Fever abate not, but is less in the
Day and more in the Night, if there
be much Sweat, and desire to
Cough, but nothing brought up,
if the Eyes be hollow, the Cheeks
red, the Nails crooked, Hands hot,
if the Feet swell, if Loathing and
Squeamishness afflict any, if Pustles
arise all over the Body, such are
suppurated, and it is a Sign of sud-
den death. Empyemick Persons on
the mending hand, when they are
almost purged, and seem quite out
of danger, if they spit stinking
stuff they relapse and dy, accord-
ing to *Hippocrates in Coacis*. You
may also reckon it a fatal Sign, when
the Pus colours Iron as if it had been
in the Fire: for that betokens
death, because it denotes extreme
Acidity and Extinction of the vo-
latil Spirits. So, if in this case
there be a heftick Fever, difficulty
of Breathing, an oppressive pain
in

In the Breast, a weak and frequent Pulse, with cold Sweats, a waiting Flux, and frequent Faintings, then the Patient is gone. According to *Hippocrates* they are out of danger, in whom, the same day that it breaks, the Fever ceases, their loathing of Meat, and their Thirst leave them, so that they go little to stool, the Pus is white, smooth, all of one colour, without Phlegm, and is brought up without pain, and with a gentle Cough, also all the other Symptoms, which were violent at first, abate a little: for then a recovery may certainly be expected, because they are Signs of Health, which quickly free a Man of his Disease. But if the excrementitious Stuff be not expectorated, and harden in the narrow winding Passages of the Lungs, it is a sign of an occult *Vomica*, and of a Consumption.

§. 12. Dietetick Cure.

THE Nature of the Disease; and the Signs of it, being found out, according to the best of our skill, we think meet to allot some of our pains to the cure. The alteration of Diet is a thing of great moment in this case, 2. *aph.* 45. Therefore we must seek relief from thence. The Air then must be temperate, rather inclining to Cold; on the contrary, a hot one must be avoided, because of the aculeate and subtil Particles of Salts, which it carries, that are injurious to the Lungs and their Vessels; and an intense cold Air may be put in the same predicament, which alone may be sufficient to make an Ulceration and Solution of Continuity by its rigid Particles and stagnation. Consult *Willis* in his Chapter of a Consumption. The Patient

must also avoid the Raies of Sun and Moon and a South-wind. In an *Empyema* the Air must be kept to driness. The Meat must be cooling, and endued with an emollient or glutinative Faculty; that it must be viscous and glutinous, as Milk, Barly-Cream, Calves-Kids-feet, Ising-glass, Rice-milk, *Simon Pauli* in his *Quadrupartita*. p. 232. highly values such a food. Grewel made of Starch and Water. In an *Empyema* dry things are proper, such as Pigeons, Partridge-bets, Small-birds, saxatil Fish, fish, &c. Here also Pine-Nuts are commended of old to such a Blood by a Table hung up in the Temple of *Asculapius* are made use of. Sowrish Fruits given to such, Prunes, Pears, Medlars, &c. to which purpose we recommend Lettuce, Endive, Cichory, Daisy Flowers, the Herb, &c. So we reject the hard of Concoction, sharp, sinpered, spiced, very sweet, but have an occult Acid in them (as sugared things have) which are very hurtful in these Diseases. The ordinary Drink must be small made of Oaten Malt, well boiled; the extraordinary must be a red Wine, Mede, Barly-Water, mulsons of Almonds, Goats-Milk, which alone *Trallianus* brags he cured one of spitting of Blood; on the other hand a Man may touch any rich strong Wines, Rhenish or Spanish. In the Function Sleeping and waking must not exceed the bounds of Moderation. Too much Motion, especially of the Breast, shivering, coughing and singing must be avoided for no Man will deny, but that incurable Rupture of the Vessels of the Lungs may be caused there

leaping, playing at Ball, riding on Horseback, or in a Coach, &c. may contribute to it, all which things are acted with too great commotion, and may force out the Blood. The Excrements of the Belly must be voided either by Nature or Art every day; so the *Menses*, bleeding at the Nose and Hemorrhoids, must have their due course. Let the Patient keep himself from all violent Passions of the Mind, and rather compose himself. But above all things let him avoid Anger, so the Daughters of Anger, brawling, contention, frettings, &c. must be avoided. For all these things according to the great *Sylvius* do pour a Volatil Bile into the Mass of blood by the Hepatick duct, found out by him, and so cause a greater effervescence of the blood, which first occasions these effects. But according to us Anger makes the Animal Spirits rebellious. Venus and Bathing are sought for the same reason, because they stir the blood, and put it in Rage, which often kindles these diseases.

§. 13. Pharmaceutick Cure.

Now I am minded to go to the other part of the Cure, where I shall observe my old course, and steer by the Compass of the accidents. They in the fit of an *Empyema* open a vein in the Arm, perhaps twice or thrice in a day, in tender people, they bleed in the foot, especially, if it arise, as it does, from the suppression of the *Menstrua*. Then they divert the motion of the blood, by cupping, ligatures, leeches, and frictions. These things premised, they

cool the Blood or Bile with Preparatives, which with a little Astringtion restrain the fluidity of the Blood; such as Syrup of Sorel, Roses, Myrtles, Quinces, Juyce of Pomegranates, Water of Sorel, Roses, Plantain, Purslain, &c. So, as they see occasion, they carry off pituitous, and cholerick and sharp humours, mixt with the blood (which are causes oftentimes of a breach in the Veins, sometimes of erosion, and by consequent of spitting blood) by proper Evacuaters, such as Rhubarb with Myrobalans boyled in Plantain water; also *Cassia* new drawn, Syrup of Roses, stewed Prunes, and such gentle things. After these things they use Medicines to stop the fluidity of the Blood and the violence of the Bile, and also to incrassate its thinness, which they call binding Medicines, such as are Trochiscs of *terra sigillata* given in Plantain water, Syrup of Pomegranates, Myrtles, Quinces, Conserve of Roses, burnt Harts-horn, all the *terra sigillata*, Bole Armenick, *Balaustia*, Mastich, Gum Tragacanth, Arabick, Plantain, Purslain, Knot-grass, *diatragacanthum frigidum*, red Coral, Juyce of Plantain, Barberries, and many more things that are well known, of which Medicines may be made agreeable to the Palate of the Patient. In the beginning they will not use Narcoticks; but when they have used other things to no purpose, and the Disease grows upon them, they fly to Narcoticks as their last refuge, but then the Patient must have strength. And if they apprehend by the bloods being black and clotted, that it falls from the Head upon the Lungs, they do not give Astringents inwardly, but rather order such

such Medicines as dissolve and discharge extravasated and coagulated blood, such as Mather, Crabs-eyes, *unguentum rubrum potabile*, *sperma cети*, &c. In an *Empyema* and *Vomica*, if suppuration of the matter gathered in the breast cannot be stopt, then they promote it by Emollients and Ripeners, to which end they use divers Medicines inwardly and outwardly. And among these they reckon for an *Aracanthum* the Juyce of ground Ivy, three Ounces of which with two Ounces of Juyce of Horehound they make into a Lohoch, and add of Frankincense, and Myrrh each one drachm, *Diapenidium* half a drachm, and so mix them, then they give water of Mallow and Hyslop. Externally they make use of Plasters and Cataplasms of Figs, roots of Marsh-mallow, Raisins, Flower of Linseed, Fenugreek and other things made up with Emollient Oyls, of which *Riverius*, who is as good as all, discourses very accurately. Their last Remedy is tapping the Breast, which some of them do between the third and fourth Ribs, others between the fourth and fifth, reckoning from the lower upwards, by a potential or actual Caution, and so by degrees evacuate the matter contained in the Chest insensibly, and then they absterge by certain Decoctions taken by the mouth and injected into the wound, by which Operation almost all the Ancient Practitioners boast how they have cured several.

§. 14.

HAVING done with the Galenical Cure, we will now go to the Chymical. And the Chymists

prescribe such Medicines as take off the sharpness of the Salts, which open the Veins and Arteries, smooth the parts, and restore the natural Balsam to the Blood; as are all sulphureous and animal Balsams, especially the mercurial sort, which are of great use in Ulcers or Apostems of the Lungs. *Paracelsus* himself *Chirurg.* lib. 2. pag. m. 56. confirms this, where he says, That Antimony yields an excellent Medicine in Ulcers, for such a mercurial Linctus contains more virtue in it than Pearls, &c. because Gold, which is accounted the highest Secret Remedy, receives its Cure of Health from it. They also use other Diaphoreticks. Exclusive of this in an *Empyema* is promoted according to their Method, by the use of Oil and Spirit of Turpentine mixed with Flowers of Sulphur. For *Paracelsus* calls Turpentine the true Balsam, because of its great healing virtue; yet there are some who prefer Spirit of Vitriol before it, namely because it cleanses the wound, but it must be used with much caution. Thus *Paracelsus* boasts, how he cured a noble man of an *Empyema*, by giving him Oyl of Sulphur in Sow-bread, and Betony-water. So *Cruicellius*, a Paracelsist, greatly commends the Spirit of Tartar and Salt, for curing of these Diseases. He says also, that Salt of Corals, Oyl of Cloves, Treacle, and Cloves, but especially *saccharum Saturni* are good Remedies against putrefaction, where the case is desperate, he prescribes three or four Grains of *pulvis nirole compositus* in some Wine or Shepherd's-purse.

§. 15.

Elmont and his followers in Spitting of Blood take the following course. First the Patient must keep himself quiet; and that the Blood may not run so fast to the Lungs, *Grembs*, a true disciple of Elmont, advises strong ligatures to the Hands and Feet; and to stop the Flux of Blood he commends a Syrup of Corals mixt with *crocus Martis* in the manner following;

Take of Syrup of Coral two Ounces, *Crocus Martis* two Drachms. Mix them for two Doses.

The same Person commends Rice boiled in Water or Milk, wherein the Blood has been quenched; and for the ordinary Drink he commends Emulsions of Almonds; and for the extraordinary, Quince-Wine mixt with Steel-Water. At length, when the red Spitting is stoppt, and the *Phlegm pulmonaris* (as his Phrase is) the author of Spittle, makes the Excrements, then he gives a Decoction of Steel quenched in it, to moderate the furious Spirits, and decrease the Excrements; it must be taken five hours after Meal. But this must not be drunk constantly, because it nourishes too much, and fills the Breast with Phlegm. But in Vomica, if the Pus turn sowre, these are proper, which we mentioned before in the Chapter of a Pleurisy.

§. 16.

Now we will proceed to treat of Hemoptoe, who, in an Hemoptoe of the Lungs, has these curative Indications.

ons. 1. Presently to stop the Flux of Blood. 2. To heal the Solution of Continuity that is left in the Lungs, without a Consumption. Now Medicines stop the Flux of the Blood (so that it runs not to the Part affected) which diminish the quantity of the Blood, and check its Estuation, and retard its too violent Motion; such as are various Juleps, for instance, this following;

Take of Water of Water-Lily, Plantain, Purslain, Oak Buds each three Ounces, Blood-stone, Dragon's-Blood each half a Drachm, Sugar-Candy as much as will sweeten it.

To this end he highly commends a Solution of Common Vitriol or of Mars in fair Water, used either outwardly or inwardly to stop all manner of Bleeding. Venesection also, Ligatures and Frictions are good; and after all these things have been tried to no purpose, he gives gentle Narcoticks, especially Diacodiatres, because by stopping the Motion of the Heart they abate the Fermentation of the Blood. Then for healing up the opened Vessels, he prescribes divers astringent, glutinating and healing Medicaments, in form sometimes of a Lick, sometimes of a Decoction, sometimes of a Powder, sometimes of Pills; This is a good Prescription for making a Decoction of Vulneraries and Balsamicks;

Take of Leaves of Mouse-ear, Plantain, Sanicle, Wild-Daisy each one handful, Flowers of red Roses half an handful, French-Barley half an Ounce, Raisins one Ounce, boyl them in four Pints of Spring Water.

Water, add to the colature of Vitriol of *Mars* half a Scruple, Syrup of Coral what is sufficient. Mix them.

Another Prescription;

Take of Dragon's-Blood one Drachm, white Poppy Seed half an Ounce, Blood-Stone, Crabs-eyes, red Coral each half a Drachm, Sugar of Roses one Ounce. Mix them for a Powder to be taken at several times.

The Drink must be a Decoction of *Chira* and *Sassaaparilla* mixt with other pectoral things. In an *Empyema* he advises cutting or opening the Side, and in such as are fearful and tender a Cautery between the sixth and seventh *Vertebra*; when a hole is made, a silver Pipe must be put in, by which the *Pus* may be let out of the Breast at several times, lest it stink, and the Patient might lose his Strength. After these things are done, some traumattick cleansing Liquor may be injected by a Syringe. As for internal Medicines he commends divers vulnerary Decoctions, or half a Drachm of the following Powder to be given twice a day.

Take of Powder of Crabs-eyes two Drachms, Flowers of Sulphur one Drachm, *Sal prunelle* half a Drachm. Mix them. Make a Powder, or make them up with a little Turpentine into Pills.

The rest of the things which must be given in this Disease and in an Apostem of the Lungs before cutting, are in a manner the same, which we mentioned before in this Author's Judgment of a Peripneumony, whither I refer my Reader, and now we have done with *willis*.

§. 17.

Sylvius, to allay the Heat of the Blood, which is often violent in this Disease, uses acid and austere things, namely Hony Plantain, Sorel; so he likewise commends spirituous oyle to take away the Acrimony of Humors, and sometimes, if the occasion, Opiates. Then for healing the broken Vessels, he commends his well known Mixture which follows;

Take of Water of Plantain Ounces, Cinnamon two Drachms, destilled Vinegar half an Ounce, red Coral prepared half a Drachm, Dragon's-Blood half a Scruple, *laudanum opium* half a Scruple, Syrup of Myrrour one Ounce. Mix them.

This Mixture taken a Spoonfull at a time will cure most breaches of the Vessels. For the time he orders Bleeding either in the Arm or Foot. So for correcting the salt or acid Humors, that either from the Head, or from any other place, he commends Opiates and mild Aromatics. But in the case, where the Spitting of Blood proceeds from the Inflammation and over-thinness of the Blood, whereby the pneumonick Vessels are stretched till they break, they must presently bleed, and the Blood with cooling Juice. Here is a Receipt or two.

Take of Barly-Water twenty Ounces, Syrup of Violets two Ounces, Oyl of Sulphur, as much as will give it a grateful Acidity.

Take of Seeds of Melons, white poppy each alike what is sufficient, with Water of Plantain, Colts-foot each what is sufficient. Make an Emulsion, and sweeten with Sugar-Candy, what is sufficient.

In a confirm'd Empyema the alteration of Blood into Pus must be promoted, which emollient and maturing Medicines will do, such as Roots of white Lily, Leaves of Marsh-mallow, Orache, Mercury, Fenugreek, also divers others, &c. This may serve for Scaraplain.

Take of Root of Marsh-mallow one Ounce, white Lily half an Ounce, Leaves of Mallow, Marsh-mallow, Pellitory of the Wall each half an handful, Flowers of Mullein, Melilot, Violets, Chamomil each two Pügils, Linfeed, Fenugreek each half a Drachm, Fat, dried Figs No. six. Boyl them either in Water or in Milk, and if the Heat be very high, in Butter-Milk: for all People cannot bear fat things, as a few days since I observed in a Man of fourscore, who upon anointing outwardly with fat things fell into a swoon.

When the Abscess is ripe, we must gently proceed to get out the Pus, left by continuance there it grows sharp; wherefore tapping the Breast must not be procrastinated, but yet we must have a care, we take not all the Pus away one time, but at several; and when way is made for the Pus, we proceed immediately to the closing and healing of the Ulcer; which purpose our Author says

Balsamus Sulphuris anisatus or *terebinthinatus* is admirable good, if it be dropt into the Sore, and five drops or more of it may be given inwardly.

§. 18.

According to the Cartesian Hypothesis, to take the edge off these acute Particles, or saline Prickles, that are in the Blood and are so ready to cut and open all sanguiferous Vessels, especially the Pneumonick, and so cause spitting of Blood; and for cooling of the Blood, all gentle Balsamicks made of Oyls, and mild Spirituous things are good; and so are all watry and cooling diluters. Take the following Julep for an instance;

Take of water of Plantain, Shepherd's-purse each one Ounce and an half, Syrup of dried Roses one Ounce, *Lapis prunelle* three drachms. Mix them, make a Julep.

They commend all ponderous things for depressing the Volatil, such as Bole Armenick, red Coral, *terra sigillata*, and a thousand such other things. For correcting sharp and salt humors, and stopping the Effervescence of the Blood, according to them Opiates are good, especially *Pilula de cynoglossa*, *de Syrace*, but above all *theriaca celestis*, *Hanoviensis*. These are the things that are good in spitting of Blood. From what has proceeded a Physician of any discretion may know of himself what may be used in an Empyema and Apostem. It remains therefore that we produce our own opinion.

§. 19.

Formerly, when we spake of the Cause of these Diseases, we said something of the natural Fermentation of the Blood, that we might be better able to discourse of the preternatural, when we had considered its contrary. The Excretion therefore of Blood is either increased or diminished: for when the Spirits and Blood are, as naturally they should be well dipped, and do their Office, a man is said to be in health and brisk; but when either this fermentation in the Heart fails or exceeds, the Pulse either upon the interception of the Animal Spirits, or upon their too great afflux, ceases, respiration ceases, and at last follows the most terrible thing in nature,

—*Mors, ultima linea rerum.*

For upon this Fermentations being augmented in the Heart, a great commotion of the Blood in the Arteries and Veins arises from thence, and thereupon an Excretion and Spitting of Blood. Now since for the most part an even and gentle Fermentation depends upon a most exact combination of a two fold Salt, of an urinous and acid, or of an alkali and acid, then upon failure of one or both of these a rage and heat is raised either in the Mass of Blood, or in the animal Spirits themselves; for if you inject an alkali, namely Oyl of Tartar, into a Vein of any Creature, after it is dead, the Blood will appear fluid and thin, and so too much dissolved; on the contrary, if you inject an Acid into a Vein, namely Spirit of Nitre, after

it is dead you will find the Blood coagulated: But it is our great difficulty to know, whether the Blood break out of the Arteries, or of the Veins. Now since there are many arguments, and those very strong ones, that it comes from the Arteries, especially because the Arterious Blood differs from the Venous on account of Consistency, the Arterious Blood is more gross and subtil by reason of the presence of Spirits, and therefore is more prone to evasate, their Opinions are very credible, who blame the Arteries; yet hitherto I cannot give a reason, why we may not hold that the Blood may come from the Veins, especially if we consider, that in the Veins the Pores are more open, that is, greater: besides, the Arteries are furnished but with single Canals, the contrary, the Arteries are double ones, so that here the matter is more difficult. However, let every one make the best of his Opinion, we will proceed to the Cure it self. In all Excretions of Blood therefore, be the Cause what it will, if nothing contraindicates, we bleed either in the Arteries, or in the Veins, especially in Women, who have their *Menses*, then we stop the remaining Blood, and dissolve what is coagulated, the Mystery of stopping the Blood consists in its momentaneous application, namely, That the Arteries and Veins in the open Arteries and Veins may close like a cork, and Wounds like a crust, may hinder the Blood from coming out, which very thing, and austere things and herbs also do promise. But it is observed, That according to the nature of the Arteries or Veins, or of the Arterious or Venous Particles, we use to give either Blood

because it both binds, and
off the sulphureous bilious
wides, to the quantity of one
in Plantain Water; or if
also abound, we mix some
with it: for violent things
never be given, because they
increase the Motion of the Blood,
and so by their violence distend the
Vessels, and either encrease the Flux
of Blood, or if it be stoppt, endanger
the breaking of it out again. If
there be a Cacochymy in the Blood,
the Patient be quiet for some
days, that in the mean while the Ves-
sels may heal, before it be purged.
This may serve for a Prescrip-

Take of French Barly two Pugils,
scraped Liquorice two Drachms,
Raisins one Ounce. Boyl them
in fair Water. Add to the Cola-
ture, as much Sugar as is suffici-
ent. Or,

Take of Cassia new drawn, Con-
serve of Peach-Flowers each one
Drachm, the best Rhubarb half
a Drachm. Mix them. Make a
Bolis. Or,

Take of Water of Cichory, Colts-
foot each one Ounce and an
half, Extract of Rhubarb half a
Scruple, Powder of Rhubarb
one Scruple, Jalap sixteen Grains,
Syrup of Cichory with Rhubarb
half an Ounce, Tincture of Ro-
ses one Drachm. Mix them.

Then for stopping of Spitting and
Excretions of Blood, and for qua-
rying the luxuriant Blood and en-
gorged Spirits, both diluted with too
much Serum, and disturbed with
the intestine Tumult, and so break-
ing violently out at the Mouths of

the Arteries and abounding with
too much of a sharp volatil Salt, or
an Alkali, we commend serous or
aqueous diluting things, such as the
following;

Take of Water of red Roses one
Ounce and an half, Plantain five
Ounces, Tormentil two Ounces,
Syrup of Myrtles, Pomegranates
each one Ounce, Spirit of *terra*
sigillata half a Drachm. Mix
them. Put it in a Glass, for seve-
ral times taking.

In exceeding difficult cases we
must have recourse to Narcoticks;
and for this purpose these are ve-
ry good, Camphore, *requies Nicolai*,
laudanum opiatum, *theriaca Cœle-*
stis, &c. But if the Blood be de-
prived of its due consistency, and
be disturbed with the Orgasm rai-
sed by the animal Spirits rushing
impetuously into the Heart and Ar-
teries (for when the Mouths
of the little Arteries are burst, and
once way is made, the Blood gu-
shes out with violence) then we
use to incrassate and coagulate with
Sylvius his mixture already men-
tioned, or with one following like
to it;

Take of Water of Purslain, Plan-
tain, Ground-Ivy each one
Ounce, Juice of Purslain one
Ounce and an half, Blood-
stone half a Drachm, Crab-eyes
one Scruple, *laudanum opiatum* two
Grains, Syrup of Coral one Ounce.
Mix them. Or,

Take of Water of red Roses, Tor-
mentil, Shepherd's-purse each
one Ounce and an half, Vinegar
of Roses one Ounce *species diar-*
rheodon Abbatis, *diatylon Santalan*

X 3 each

each one Scruple, Dragon's-Blood, *terra sigillata* each half a Drachm, Syrup of Miracles one Ounce. Mix them.

But in a case where the Acid is deficient, and rather an Alkali, or sharp volatil Salt has the predominance, either in the Spirits, or in the Blood (as any one may see in the Plague and other malignant Fevers, the malignity of which Diseases consists in a volatil Salt exalted to the highest pitch of sharpness, in which spontaneous profusions of Blood very often hasten the Patients end) for the incrassating and coagulating this attenuated Blood, besides Acids, by which this volatil Salt, infamous for its Acrimony, is conquered and depressed, nothing is found more proper than the following *arcanum*, which never failed us;

Take of crude Alum, Vitriol of Mars, *Saccharum Saturni* of each equal Parts; pour to them of Vinegar, Liquor of *terra sigillata*, Spirit of Vitriol each alike quantities. Prepare it according to Art. The Dose is from ten Drops to thirty.

There is another styptick Liquor made of *terra Martialis*, which will fail no Man. Things good for this purpose are Tincture of Bloodstone, especially ours, which shall be mentioned hereafter, Tincture of Coral, of *terra Japonica*, of Sulphur, of Vitriol, to the quantity of of sixty Drops. Spitting of Blood often arises in the Scurvy, which may easily be cured, by adding convenient Antiscorbuticks, especially in Whey. For dulling and fix-

ing the lixivious volatil Salt, for correcting and tempering the Acrimony of the Blood, and increasing its consistency, and taking account of their Oyl or Acid, volatil oily Spirit, we compose Emulsions of the four greatest cold Seeds, white Poppy adding a few Almonds for Tastes sake; for which end Opium are good, and *Laudanum* that stout conqueror of the Spirits, especially *theriacal* and *sulphur minerale* fixt by art. These things have a great power in fixing the sharpest Salts and volatile Spirits. Then for closing the opened Vessels, and glutinizing the minute Fibres of the Arteries and Veins, moderately astringent and glutinous Vulneraries are good, for which purpose we recommend the following Decoction;

Take of the Leaves of Ladies-tulle, Speedwel, Sanicle, Yarrow, Agrimony each half an Ounce, Roots of Comfrey, Liquorice, Tormentil each half an Ounce, Flowers of Daisy, wild Pimpernel each two Pugils, Pine-apple half an Ounce, red Saffron three Drachms, Crabs-eyes one Ounce, boyl them in fix Parts the Consumption of a third. Or in the form of an Electuary.

Take of old Conserve of Roses one Ounce, *Loboch de psyllio* one Ounce, Conserve of Comfrey half an Ounce, *pulvis stypticus* half an Ounce, *vel Cro'lii* one Drachm, Crabs-eyes prepared half a Drachm, Syrup of dried Roses, Moulded each what is sufficient. Boyl them, make an Electuary.

Emulsions of Almonds are also good in this case.

Take of sweet Almonds blanched three Ounces, four greater cold Seeds, Poppy each half a Drachm, with Barly-Water make an Emulsion. Add of *saccharum perlatum*, as much as will sweeten it. Or,

Take of Water of Yarrow, Speedwel, Shepherds-purse each one Ounce, *pulvis stypticus Crollii* half a Drachm, Seeds of white Henbane fifteen Grains, Syrup of Comfrey one Ounce. Mix them. Or in form of a Powder, to procure tenacity to the Blood,

Take of *pulvis anonymus* half an Ounce, Henbane Seeds, Crabs-eyes each one Drachm. Mix them. Make a Powder of several Doses, Or,

Take of red Coral, Pearl prepared each one Scruple, Gum-Arabick, Tragacanth each two Drachms. Mix them. Make a Powder for seven or eight Doses, and take two of them every day. Or,

Take of *Syrupus de symphyto Fernelii*, Syrup of red Poppy, of white Poppy each one Ounce, *laudanum opiatum* two Grains, Water of Speedwel one Drachm and an half. Mix them, and take it by spoonfuls.

Also Asses Milk with Steel quenched in it, is commended, because Chalybeates bind without obstruction. *Balsamus sulphuris terebinthinatus* or *anisatus* used outwardly or inwardly, to five drops, will conduce much to the healing the Vessels of the Lungs, we commend

the styptick Tincture of the English and an Infusion of Oyl Olive into the Veins of the Patient, as generous Remedies. As for Apoplems of the Lungs, in them (that is, in a *Vomica* and *Empyema*) if there be no Fever, we highly value all sulphureous Medicines, such as Tincture of Sulphur, *balsamus sulphuris terebinthinatus*, the Samaritan Balsam, made of two Pounds of Oyl Olive, three Pounds of white Sugar, and two Pounds of Wine, also our universal Balsam, made a certain way out of Antimony. That also of Digby's is not amiss in a *Vomica*, to wit, an Apple filled with Frankincense, then roasted and eaten. The same Author also recommends to country People a Dish fit for their Tooth, that is, Horse-dung boyled in white Wine, and then eaten, Juice of Cresses is highly valued by *Cardilucius* in this Disease, but you have only the Authors word for it, I never yet in my Practice tried it. But when all these things do no good, if the Breast be filled and stuffed with great store of purulent Matter, we must have recourse to Tapping of the Breast (whereby I have seen several cured) but with this caution, that we use to do it with a Cautery between the sixth and seventh *Vertebra*, and then we let out the purulent Matter by little and little through a silver Pipe. And when this cruel Remedy is used, it is a good sign, if the *Pus* do not come out fetid, for then we may hope well of the Patients recovery; in the mean time we use to drop in some of the foresaid *balsamus sulphuris anisatus* or *terebinthinus*, and we give five drops or more inwardly, if there be occasion. For the ordinary drink we commend

In this case the following vulnerary Decoction.

Take of *Lapis sabulosus* three Drachms, Leaves of Ladies-Mantle, Water-creffes, Saracens confound, Golden-rod each one handful, Speedwel one handful and an half, Liquorice-root scraped one Ounce, Daisy-Flowers half an handful. Mix them. Make a Decoction in Water. Or,

Take of a Decoction of Barly, Leaves of Plantain and Brook-lime or Water-creffes three Pounds, towards the latter end let half an Ounce of *Sal prunella* be added.

Then we use to conclude the cure with divers Precipitaters, such as Crabs-eyes, Coral, &c. Nor are we willing to neglect divers external things, both Unguents and Plasters. Let this be a Receipt;

Take of Oyl of sweet Almonds, Chamomil each half an Ounce, Poppy two Drachms, Saffron half a Drachm, Wax what is sufficient. Mix them. Make an Unguent, wherewith to anoint the Breast. Or,

Take of *Emplastrum diachylon cum gummi* one Ounce, Powder of Cumin-seeds, Florentine *Iris*-root each one Drachm, Saffron half a Drachm. Mix them. Make a Plaster.

When these things will do no good, the Physician must drive before the Wind of divine Providence.

In spitting of Blood that is mixed with Liquor of *de la Vigne* the Patient will be proper, i. e.

Take of Alum, Vitriol each one Drachm, Phlegm of Vitriol one Ounce, let it boyl till the contents be dissolved, then let it be filtrated. Liquor be sharpened with a few drops of Spirit of Vitriol. Or,

Take of crude Alum half a Drachm, *terra vitrioli dulcis* one Scruple, Phlegm of Vitriol a half sharpened with Spirit of Vitriol one Ounce and an half, or two Ounces. Mix them.

But the Spirit of Wine is better by it self, externally applied, than all these things, because it is all fluid Blood, even while it is hot and fresh, uses presently, to the holders wonder, to coagulate it; and, which is a thing not known to all Philosophers and Physicians, Spirit of Wine it self may easily be coagulated into a dry Powder, a thing which I have often done. Knot-grass tied to the Apoplex, is said, presently to stop Bleeding, as also a Toad well dried and beat in the hand. Let the traumatic Essence be given out of the Nose twice or thrice a day, to three or four drops; and if any Blood be fresh still, then it must be mixt with the Essence of Sulphur of Vitriol. Or,

Take of Essence of Flowers of *St. John's-wort*, Crabs-eyes each one three Drachms. Mix and give it.

CHAP. VI.

Of the Palpitation of the Heart.

§. I.

WE are yet about explicating the nature of Pectoral Diseases, among which the Diseases of our Faculty do with other Diseases of the Heart, reckon, Palpitation or Leaping of the Heart, which the Greeks call *παλινδρασιας*.

Description.

And this Disease is described to be a convulsive Motion, having its origin from vitious or bilious Blood, or from a too sharp diluted Serum, preternaturally contained in the pericardium, which villicates the Heart and the nervous Fibres of the Arteries. The Pulse indeed the Heart and Arteries are naturally moved of the Heart by *Systole* and *Diastole*, but are not so in this Disease; for they are violently irritated, are in convulsions and contracted. The Motion therefore of the Heart, which is performed by the Pulse, is natural, but in the Palpitation of the Heart it is preternatural; therefore the Disease takes its name from the Part affected,

and the Symptom, wherewith the Patient is afflicted.

Difference.

But this Disease of ours differs very much from the Passion of the Heart, which is a Disease of the Mouth of the Stomach; but ours, of the Heart it self and Arteries. And it is vulgarly reckoned to differ from the trembling of the Heart in this, that in the trembling the carneous or motive Fibres of the Heart are affected by themselves, and the morbifick cause resides not in the Blood and cardiack Arteries, as it does in a Palpitation, though (in my Judgment) they only differ in degrees, and the nature of this Disease will appear more exactly by the following Case.

A Case.

A young Man, a German, twenty five years old, candidate in Physick, of a Melancholick Complexion, having made divers Journeys through France, England and Holland, having kept a bad Diet, and eating too much sowre Milk-Meats in

in *Holland*, fell into a double Tertian, and then into a Quartan, after he had tried all Remedies in vain, and was returned to his own Country, he was rid of his Ague, but after eating, there were still remaining Tensions of the *Hypochondria*, heaviness and anxiety of Heart, *Vertigo*, and a violent Palpitation of the Heart; especially after too much Exercise, or drinking of Wine, he felt a beating in all his Arteries, even the least; his Urine was full of small Gravel, sticking to the sides as well as to the bottom of the Urinal, with a very strong Pulse. The Patient requires help.

§. 2. Part affected.

BY the common consent of Authors, the Subject of our Disease is agreed to be the Heart, the Pump of Life, which with the *pericardium* they reckon to be affected, either primarily or by consent: They think that the Vapors may ascend from the lower Parts to the Heart, and vellicate it. But we reckon, That beside the Heart, the Arteries are here affected, as to their Fibres, but especially the small Fibres of the left Ventricle of the Heart, which receives the Blood in abundance from the *vena cava*, and therefore the Heart bears the first brunt. Therefore we make no question, but the Heart is in this case affected both idiopatnically and sympathetically, and the thing is the more credible, because peccant Matter may easily be communicated and transmitted from all Parts, by means of the Circulation of the Blood, for when these are infected, the Heart, and not the Blood is infected. Also, that

the Heart is a Muscle, and its Fibres, may easily be contracted; has been proved before by Experiments; for if Hearts be taken of living Creatures, when they are hurt with the Knife's point, they contract themselves, and themselves impetuously, of which I shall say more hereafter, and treat of the cause of the disease.

§. 3. Diagnostick.

NOW we will proceed to the Diagnostick. Breathing in this Disease is small and unequal Pulse in unequal and impetuous the Heart of the Patient and throbs, as if it would burst; if you lay your hand to the left side of the Heart. This complaint is sometimes so violent, that the adjoining Ribs have been broken, and those that were about the Paps, have been dislocated, as *Lincolnius* and *Sylvius* have observed. Also the Arteries of the whole body, which we cannot feel in health, as are well, are moved here, especially those that are near the Throat, yea and sometimes Patients feel the capillary Arteries beat strongly in their Fingers. In some this Palpitation is insupportable, that their Cloaths, with they defend their Breasts from external Injuries, may be felt by the bye-standers at a distance, and fall according to the motion of the Heart and Arteries, as I have said days before I wrote this, I knew a young Man, a strange and delicate. Now and then also the bye-standers use to hear a plain or noise, as *Forestus* relates in *lib. 17*. There are Anxiety of the Heart, especially in a large

black and scorbutick Constitution, which I have observed to be chiefly afflicted with this Disease. And this Disease is apt to return on any Motion of Body or Mind, especially upon Anger, Riding, Walking, Surfeiting, Heat, immoderate Exercise, *Venus*, Horror, Melancholy, Fear, &c. For the Symptoms which chiefly accompany this Disease, are a sense of weight in the Heart, Rumblings in the Guts, flatulency by Wind, and Tensions of the *Hypochondria* caused thereby, there is a *Vertigo*, and Urine full of Gravel; but if it arise from contumaciousness of other Parts, a prudent and circumspect Physician may easily know that by the hurt of those Parts; so that we need not insist longer upon this Matter, but will rather turn our selves to the Etiology.

§. 4.

And now we will briefly enquire into Authors various explanations of the cause, as we have done of other Diseases. The old Galenists say, That the cause of this Disease is either a too hot or too cold intemperature of the Heart: some of them blame flatulent, malignant and gross Vapors and Spirits, shut up and detained in the *pericardium* or in the *sinus's* of the Heart, which are either bred in the Heart, or are sent from some where else, namely from the *hypochondria*, or Womb, or some other Parts, that are indisposed, from which they hold these Vapors may be sent by the Veins to the Heart. Others of them hold, That it may be bred and increased by a watry and purrid Humor, like Urine, included in the *pericardium*, and that

thereby the Heart is irritated and solicited to a preternatural Motion, they also hold, That it may be caused remotely by Anger, *Venus*, Surfeiting, violent Exercise, &c. and their reason is, because by these things the Blood is inflamed, and the peccant Matter does, as it were, oppress the Heart, and therefore it endeavors to expel, what is noxious, by a violent Motion or Pulsation. And they do not at all doubt, but the same Disease sometimes arises from a *Polypus* of the Heart, or some watry, bloody Humor, That is in the *pericardium*. *Paulus Aegineta* l. 2. c. 34. judges, That strong Palpitations of the Heart, do often proceed from the abundance or heat of Blood received into it. *Fernelius* blames rectorrid Bile poured out into the Arteries, and sometimes gathered in the *Præcordia*, oftentimes in the Spleen. In a word, the whole Galenical Party do verily believe, That the four Humors are here amiss.

§. 5.

THe *Paracelsists* do here, as is their manner, obtrude their Tartar, which by its vaporous and dissolved Substance is in all the Humors, and carried with them to the Parts. When therefore the *Archæus* of the Heart cannot rightly separate and expel this enemy, it cannot otherwise be, but that the Motion of the Heart must be thereby disturbed. They also blame black and malignant Fumes arising from the cacoehymick *Mercury* sublimate, beset with the sharp and corrosive Spirits of the Salts, besieging the Spirit of Life, now this, endeavouring a violent escape, and the

the gross Fumes opposing it, they thereby cause such a Trepidation and Palpitation. And they use to compare it to an Earthquake, where-in abundance of preternatural Spirits or Wind, contained in the Bowels of the Earth, attempt a passage with great violence, and shake the Body of the Earth, which resists their various Motions, while they are carried a contrary way, and thus in the same manner they think, That the Palpitation of the Heart is caused by malignant Vapors let loose in the Heart. Some of them blame the precipitate Spirits of the *Mercury*, that beat against the *capsula cordis*; others blame the Tartar of the Aliment, not rightly separated, and so hurtful to the Heart.

S. 6.

Helmont refers the cause to a heterogeneous Gas, participating of the nature of the balsamick Salt, which affects most powerfully and quickly. *Tr. Complex. atque Mist. Element. num. 42.* In this Disease he acknowledges the austere ponticity of the Humors, contaminating the sensitive Spirit, to be the primary cause thereof: for he holds, That the *Archæus* of the Heart is irritated thereby, and stirr'd up to a disorderly Motion. He affirms also, That foul Vapors ringed with strange *Ideas*, and carried to the Heart, may produce something of the like nature, which *Ideas* in other places he gives an ill Character.

S. 7.

Willis holds, That this Disease, according to anatomical Observation in a Dog, does arise from the efflux of Blood being hindered in the Arteries as much as in the *Systole* of the Heart its Cone and Sides are together and straitned, and the *Systole* of the Heart with the Vessels enlarged by the Blood gathered there, and sticking together or forced back, swell whence flows the Palpitation of the Heart. Certain therefore that this Disease depends upon a fault in the Blood or Vessels he proves it by this, Because thorick People, and such as are nourished with a hot Blood are inclinable to this Disease, and Obstruction may easily follow thence, both by the fault of the Arteries annexed to the Heart, or of the Ventricles of the Heart, or of the Vessels of the Lungs, or from the Humors concreting in those Vessels, whereupon the Vessels of the Heart do not contract themselves perfectly, and the Blood that would go out of the Heart not finding room in the Lungs, is by violent distending the Vessels the Heart shake the Heart, and thereupon necessarily comes the Palpitation of the Heart. He proves by solid Arguments, That the Heart is spasmodically affected in this Disease, and his primary Argument is, because it is common to such as are troubled with hypochondriack or hysterick, the cause of which Fits is convulsive: for it is evident, That the Heart has its Arteries, Nerves, and motive Fibres, which if

contracted or too impetuously moved, they may easily stop the fluent Blood and so this Disease is raised, as we may observe in Sadness, Shame, Love, where the Spirits are moved disorderly and the Vessels are on a sudden, for a good while so contracted, that the Blood can scarce, and not by turns get out of the *Sinus's* of the Heart. He therefore maintains, That this Disease does usually arise from too much Blood gathered, and stagnating in the Heart, together with a spasmodick contraction of the nervous Fibres: The which he proves, for that the Palpitation of the Heart arises from poisonous Concretions that are usually within the *sinus* of the Heart and the Arteries, as other Practical Physicians do also observe: The which he confirms by the impetuous Motions of the Animal Spirits, which easily cause a Convul-

§. 8.

Julius, taking the Palpitation for a convulsive Motion of the Heart, defends his Opinion by this, that it is a Motion in some measure disorderly forced, and often violent. He also blames sharp Vapors arising from the *intestinum tenue* to the Heart, by reason of a violent Effervescency raised there, because they disturb the Effervescency of the Blood, and molest the Heart, and thereby irritate it to an unequal contraction of it self; nor does he excuse viscous Humors, disturbing the Effervescency in the Heart, nor carneous Tumors in the substance of the Heart, nor bony excrescencies, Cartilages, Worms, Wounds, &c. which molest the

§. 9.

Cartes ascribes the natural Pulse to the rarefaction of one drop or two of Blood, and to the Bloods swelling thereupon, and slipping out of the Ventricle of the Heart into the Arteries: And he refers the cause of the Palpitation of the Heart, to over thick and spirituous Blood, which Ferments either over impetuously or mildly, and so passes more quickly or slowly out of the *sinus* of the Heart. Now therefore, if many both spirituous and viscous Particles be found in the Mass of Blood, it cannot otherwise be, but that this Disease must arise; for since the viscid Particles cannot so easily be severed by the spirituous, when they are quickly moved, by reason of their tenacious Figures sticking fast one to another, hence as often as these vicious Particles enter the Ventricles of the Heart, and as soon as they rarefy, they require more room, whence of necessity some violence must be done to the Heart and Arteries.

Therefore it is evident from what has been said, That the cause of the Palpitation is for the most part to be ascribed to the crudity and viscosity of the Blood, and that the Coats of the Ventricles of the Heart and Arteries are affected and shaken, which very thing the Cartesians do hereby prove, because the action of Fermentation, which otherwise would languish in Liquors to be fermented, for instance in new Wine, is easily promoted by casting in crude, *i. e.* unripe Fruits; and moreover, because they that are troubled with this Disease, void viscid Stuff, whence

it

It may the rather be concluded, That the Fermentation of the Blood is increased: for the over crude and viscous Blood returning to the Heart, may very well raise immoderate Effervescencies and Ebulitions not agreeable to nature, violent dilatations and preternatural Motions of the Heart, which are causes of the Palpitation, as Wind is of Storms. And they conclude as much from the *juvantia* and *nocentia*: because the sick are helped by Diaphoreticks, and hurt by Viscids; for several Practitioners know, That this Disease has come upon eating viscous Meats at Meals, such as sweet Milk mixt with Sugar, Feet of Beasts, Sea-fish, Oysters, &c. Nevertheless the Men of this Sect do not deny, That this Disease may be bred by too great a quantity of Blood, and by sharp, acute Particles flowing out of the Auricles of the Heart into its Ventricles and Fibres, upon this account, because violent Exercise, Running, Leaping and *Venus* are able by moving and agitating the Spirits to produce this Disease. So likewise none of them question, but it may be produced by a contraction and straitning of the Ventricles of the Heart, or by a *Polypus*, *Phlegm*, *Worm*, or a *Stone*; for then more animal Spirits than ordinary have recourse thither, and spasmodically contract the Fibres of the Heart and Arteries; and they deservedly place this Disease among spasmodick Diseases. See *waldsmidii Fundamenta medicinae* p. m. 86. And let this suffice for other Men's Opinions.

§. 10.

UC, before we come to explain the cause of this Di-

sease, will premise something concerning the natural Action of the Heart, that so the preternatural Action thereof may appear the clearer. The Heart is the Work-house wherein the transmutation of Chyle into Blood is performed, and indeed the Chyle mixt with the *lymph* is poured into the left Artery Vein (where the Blood receives its Rudiments) by the thoracic Duct (which in Men is usually on the right side, but in Beasts on the left) is wrought by it, and by Motion is driven into the Auricle of the Heart, then into the left Ventricle, and afterwards turned into the like Blood. It need it be so much admired, that the white Chyle does so easily grow red, since this is easily effected in Chymistry: I keep a most limpid Liquor by me, which upon pouring of an acid Spirit to it grows red in a moment. For the Heart is the principal Part, and when it the Arteries, which when irritated and hurt, the Blood needs run out, and the circulation be hindered: wherefore all Writers of the Heart by the universal consent of Physicians are said to be mortal; which the noble Seneca in his *Triumphus cordis* confirms where he says, That it has never been found, that any man wounded in the Heart recovered. But I would have all here take notice, That in the Earl of Nassow, there was a Bullet of Lead found in the Heart of a Boar, covered with Flesh, that no way endangered his life: for he was a large Boar, and when it was cut out with a Huntman's knife, one might observe that the Wound was not made two or three

a long time before. These few things premised, let us examine the use of the Heart; and indeed some of the Moderns hold, That Blood is made in the Heart by elixating with the innate heat of the Heart. Some imagine, That the Blood being by repeated course carried to the Heart, is rarefied, heated and kindled by the vital Flame blazing in the left Ventricle, and so the Chyle mixed with it is attenuated, and turned into Blood. But *Sylvius* thinks, That from an acid *Lympha* ascending with the Blood by the Arillary Veins, and from Bile ascending with the Blood by the neck of the *vena cava*, and they meeting in the Heart, because of the contrariety of the Acid in the *Lympha* to the urinous Salt in the Bile, there arises an Effervescence in the Ventricles of the Heart. But the Motion of the Bile, which supposes is not so certain, and *Lympha* is not so acid to Sense, the ascending Blood so bilious, to be able to raise this Effervescence, therefore we justly suspend judgment, though the Noble *Joh. ten Rhyne* seems to subscribe, when he says, *The primary cause of the universal Motion or circulation of the Bile in the Blood depends on a particular agitation, which meeting with the sub-acid Lympha, it causes a vital Effervescency, which fights against the other with particles furnished with a different set of Figures, that the innate heat constantly be kept in the whole*

But we rather suspect that the Blood is made by the Fermentation of a twofold Salt, an acid urinous, or a volatil *Alkali*, rising in the Mass of Blood from every moment, when the Man is conceived, by the concurrence of

which being dissolved (and by the influence of the animal Spirits, which give so great a Motion both to the Heart and Arteries, and so cause the Blood to flow more or less) they act one upon the other, and so life is continued. Wherefore *Helmont* is not out, when he places a certain vital Ferment in the left Ventricle, namely brought in and illuminated by vital Spirits. But we reckon, as does *Ettmullerus*, That this acid and urinous Ferment is radicated in the salient Point of an Egg, because of a saline volatil Spirit; which *Charleton* has long since observed in his *Oeconomia* p. 65. saying. *It is manifestly apparent that the vital Spirit is raised in the primum seminale by means of the plastick virtue, and is fiery, for that noble Principle, which by its Heat and Motion in turning the purer part of the Colliquamentum from white to red, first makes Blood in the Embryo, it will be difficult to explain it, and likewise what it is that converts Chyle into Blood, and is the Author of the same work ever after, as long as the Man or Beast lives.* For to maintain life, these balsamick or sulphureous Particles of the Blood, must, as far as is possible, be preserved; since therefore the Coats and Membranes of the Veins and Arteries are porous, wear out by degrees, and their texture is broken, it cannot otherwise be, but these volatil Particles must fly out in time at these apertures, the Blood must cease to be volatil, and death at last invade the Hearts of old Men. The principle of Life is therefore so far good, as the Blood is kept in Motion by volatil or alkalick Particles, that is, the Animal Spirits.

From what has been premised any one may easily guess at the cause of the Palpitation of the Heart; and it is certain, That it is different and various, according to the various and different texture, volatility and fixity of the Blood and Spirits: for sometimes it consists in a coagulation of the Blood made in some certain place of the Heart; yet in my Opinion, it is most usually caused by its too great rarefaction and excessive Commotion caused thereby. For no Man, who has any Brains in his Head, will deny, That this Commotion of the Heart may be hurt by divers causes, for it is as clear as the Sun, that this Disease may be caused either by an Acid contained in the Mass of Blood it self, or sent thither from some of the inferiour Parts, to wit, by an over sower pancreatick Juice, or an over volatile scorbutick Serum abounding in the Blood, or by a sharp Water, lying in the *pericardium*, and at sometimes communicated to the Heart. For we exclude no sharp Humors, where acid, viscid, austere or pituitous, if so be they are able by their Acrimony to irritate the *parenchyma* of the Heart and its Fibres to a convulsive and palpitating Motion, and to create a grumescence or thickness in the Blood, so that it is as it were hindred in the midst of its Motion, which lest it should cease, Nature throws off by a subsultary Motion, whence proceeds this Palpitation, which we are now treating about. So also we believe, That the animal Spirits, in a tumult, and rushing impetuously into the Heart and Arteries, do often; if not always, affect them spasmodically: for from thence we deduce the frequent and vehement Pulse, Heat, &c.

§. II. Prognostick

NOW in order let us take account of the prognostick Signs. In respect of Life, Death in general this Disease is very dangerous; and it is evident That life is endangered by the cause the Part affected is noble. Symptoms also are violent, Swooning, suffocative Catarrhs, Comas, &c. but all hope is past, if any thing of malignity appears. And it is often fatal, because of the natural distribution of the Blood is hindred. Yet that which is sympathetically need not to be feared, for this is an instance of eternal verity in the Schools. What Symptoms, without consent, are less dangerous than that are essential. *Timaeus* lib. 23. says, That the issue of this Disease is dubious, because the principal Part is affected, and it often degenerates into a *Syncope*. But this Disease is difficult to cure in Women, because of their impure viscid Blood, and sedentary life, than in Men. If the Disease do ever abate and return, and afflict the Patient, it endangers his life. But if there be a Unity in the Head be united with it, the case is desperate, though some have been freed from this sad evil by Bleeding, by Diet, and generous Medicines, which we shall treat hereafter. On the other hand there are some who after they had used all things to no purpose, have recovered a year or some Months before with it again, and out of the World before their time; and have been taken off by accidents; and some when they

ought themselves well, have died suddenly in a Swoon, or of a vocative Catarrh: for there is imminent danger of sudden death, this Disease hold one long or recovers often. And if it proceed from external cause, as from the violence of Venom, Bite or Blow, the cure is also dangerous; yet here ought not wholly to despair; however a Physician has always need of this Caution, to keep his diagnosis dubious, lest he discover both himself and his Art. This Disease is not so familiar to those as are troubled with Swooning, as to them that have a Swelling of the Spleen, and are full of black stagnant Blood, namely hypochondriacal People. Lastly, the Palpitation of the Heart ceases upon the solution and correction of the viscid Matter, which when removed, the natural Fermentation is restored in the Heart, and all is well, if the Cure, which now follows, be observed.

12. Dietetick Cure.

And indeed the first fountain of Cure is Dietetick, whereby the Physician relieves his Patient. Now much a due course of Diet is to do in preservation both in Diseases and Death, daily experience teaches. To this purpose Seneca is excellent de brevitate vite. c. 1. we have not received but lent our Lives (short (by Luxury;) are we sparing but prodigal of time: as great riches, when they fall from the hands of a bad Master, are quickly lavished away, but an Estate, though mean, if it fall to a good Possessor, does encrease by holding. Wherefore we, as in every thing, so here especially being solicitous about

the observation of the Palpitation of the Heart, will not treat only in general, but in particular, what Diet we do advise, and what we disswade in this Disease. And it is evident from what has gone before, that not only Meat and Drink but all the non-naturals are herein comprehended, of the use and abuse of each of which we shall briefly discourse.

Choose therefore a pure Air infected with no Filth, or Cloudy and Salt Exhalations, as it is in maritime Parts which, unless it be such as the Physician would have it, must be corrected by art, for when the Cold exceeds, it must be heated with Fumes of Lawrel-leaves, Juniper, &c. When heat is urgent, it must be cooled by all means.

Food must be such, as may breed a good and laudable Blood and Spirits (for such as the Blood is, such are the Spirits) not a viscid, ferous, thin, nor a salt and sharp one, the simpler the better, according to Celsus. The Meat must therefore be temperate, of a good Juice; and for breeding of better Blood let Broths be seasoned with Saffron, Mace, Cinnamon and other Spices, both Herbs and Roots. For this purpose Broths are good, in which opening Roots of Asparagus, Butchers-broom, Fenil, Bark of Capers, &c. have been boiled. I have known Indian Chocolate given with good success. On the contrary flatulent, gross, viscid, sharp, salt and excessive acid Meats must be avoided; also eating of Garden Fruits, Milk, and smoak-dried Meats is naught. For these cold and flatulent Meats do of themselves breed a flatulent (rather a sharp) Chyle, according to Galen de palp. cord. c. 5. Salt Meats are very hurtful in

his case, because they sharpen the scorbutick Serum, and by consequence accelerate the Motion and violence of the Blood and Spirits; for scorbutick Persons are usually troubled with this Disease.

The *Drink* must be small, odoriferous Wine, mixt with Water: But in a hot Palpitation, where the use of Wine is hurtful instead of it let him drink a cordial Drink made of Peels of Citron, Orange and Cinnamon. On the contrary, let the Patient avoid rich Wines, and such as are corrupted with much Sulphur, which enrage the Blood and animal Spirits, and sollicit and stir up the Heart to an extraordinary Motion. And *Helmont* has taken notice, that great drinkers of Wine, and artists who are employed much about *aquæ fortes*, are troubled with the Palpitation of the Heart, because they attenuate the Blood, and injure the Spirits with their Taints. In this case also vitious and standing Waters are bad, and Beer made of such Water, windy, not well boiled, hopped and sower, is bad; all which things hurt the Blood, and by consequence produce bad Spirits. The Patient therefore being made more cautious by the *juvantia* and *nocentia*, let him avoid what is hurtful, and rather favour his health than his Palate.

The *Motion* of the Body must be moderate, for too much of it exalts the Blood and Animal Spirits, enrages them and easily provokes them to spasmodick Motions. So likewise too much Rest does harm, to wit, a sedentary life, as *Helmont* has observed, who says, that idle Persons are afflicted with the Palpitation of the Heart, because the Chyle not rightly elaborated is in fault, and the Blood is not rightly

acted, which then stagnates, comes gross and viscid, and consequence sharp and vellicose hereupon also the serous and Particles, that used to fly away, not evacuated by transpiration, remain in the Mass of Blood, especially about the Head, and with many Crudities and Elements, hurtful to the Mass of Blood, and the animal Spirits that are in the Nerves, and often produce this Disease.

As to *Sleep* and *watching*, must avoid excess on either, and we must always keep in memory that of the divine *Hieronymus*, *Sleeping and watching*, exceed bounds, it is bad. For moderate *Sleep* renders the body torpid, and so unable for *Action*, and it also renders the *Blood* torpid in its Motion, too much *Watching* continues *Spirituos* Particles in the *Blood*, and so leaves a rapid, viscous and sharp *Blood*.

As for the *excreta* and they must be brought to the of Nature, otherwise they are authors of this Disease; therefore suppressed *Menstrua* in the Female sex, the Hemorrhoids in both bleeding at the Nose must be stopt, lest the vitious Particles retained in the Mass of Blood, and plainly corrupt it with impurities.

Let the Patient indifferently
void the *Passions of the Mind*,
specially Anger (wherein
times a trembling is observed
the Limbs, why not in the
Sadness, Fear, sudden Joy, Sorrow,
Venus, for one told me, That
Venereal Sport such a Pain
came upon him, that unless
desisted, he had died for it.

avoid all violent things, and as possible esteem them his enemies; for these things have great influence upon the Blood and Spirits, they breed Inflammations and humors, they kindle Fevers by agitations of the Spirits, and a thousand other mischiefs issue thence, as of the Trojan Horse. And what mischief they do to those that are ill in health, daily experience, the most faithful mistress, does set before our Eyes, to the over-late repentance of offenders.

§. 13.

These things premised, we will proceed to the pharmaceutick cure, beginning, according to the method we have hitherto observed, with the Ancients. They therefore first of all, if the Body were cacochymick, rendred the humors obedient to Nature by Preparers, such as *Syrupus de duabus radicibus, Byzantinus, Oxymel simplex, Compositum scilliticum*, Water of Betony, Decoction of Aniseed, Betony, Fenil. In melancholists for this they use Syrup of Dodder of Camomile, of Hops, of Apples, &c. And in a bilious Constitution Juice of Lemons, Sorel, Water of Lettuce, Violets, Bugloss, Roses, Cichory. Which Humors thus prepared, they at last purge off with their evacuating Medicines; for example. In a hot Constitution they use *Syrupus de multiplici infusione rharbari*; and in a melancholick Disposition they give *Confectio Hamech, Pilule de lapide lazuli, sine quibus esculenta, senna, epithymi*. But when the Disease comes from cold and crass Humors, they prescribe trochiscated, Agarick

Pills, &c. They usually also cry up Bleeding for an excellent Remedy in this Disease, and they let Blood till the Patient faint: In cold Constitutions they will not admit of it. Then they endeavour to drive all manner of heterogeneous Matter to the ignoble Parts, by Clysters, Cupping, Frictions and painful Ligatures, &c. Then they strengthen the Heart, and amend the hot and bilious or cold phlegmatick intemperature of the Blood by the following Medicines, which they call Corroboraters, such as *Species diambrae, confectio alhermes, aromaticum rosatum*, Treacle given in Bugloss-Water, Musk, *Diamorion, diamoschu dulce, Hippocras-Wine*, Juice of Bugloss, candied Citron-Peel, Zedoary, Nutmeg, Cloves. Externally they order the application of an Epithem of Cordial Water and Majoran, and also Bags of *Lignum Aloes, Species diambrae*, and other aromatick things.

But in a hot Palpitation, beside the aforesaid, they say that these Corroboraters are good, *Species diarrhadon Abbatis, diamargariton frigidum, diatrion santalon*, Syrup of Pomegranate Juice, Sorel, Apples, Bugloss, Limons, Quinces, &c. In this case they use to apply externally Epithemis of Flowers of Water-Lily, red Roses, Bugloss, Violets, with cooling Cordial Waters, or Bags filled with such *Species*. They prescribe also divers Cordial Balsams and Liniments, for instance, of *Lignum Aloes, Rhodium* and Nutmeg. They say, that Balm, Bugloss, Borrage, Coral, Pearl precious Stones, Bone of a Stags heart, Ivory, Unicorn's horn, &c. are good for all Palpitations of the Heart of what sort soever, out of which a prudent Physician may of himself make

several Receipts, which we shall now forbear.

§. 14.

THE Chymists in the Palpitation of the Heart advise the giving of such things, as remove the Oppilation of the vital Spirit, disperse cacochymick Fumes, and highly strengthen the Balsam of Life; therefore *Paracelsus* advises the giving of one Scruple of prepared Gold in Lavender-Water, drawn with rectified Spirit of Wine; others of that Sect commend Oyl of Coral, Tinctures of Gemms, Sapphire, Jacynth, &c. especially of Gold, if four or five drops of it be given in Balm-Wine. Some do in this Disease highly commend Oyl of Cinnamon, Amber to three drops, and the Essence of Pearl given in Syrup of Citron rind with Musk. So *Quercetan* highly esteems Essence of a Stag's-heart, with alcolizate Spirit of Celandine, Harts-horn, *Monoceros*, with alcohol of Baum, Musk with Treacle Water, Civet and Castor extracted with their *Menstruums*. Many prefer an Extract of Cochinele or Alkermes as the highest Cordial. As for Externals, which here and there may be met with in Authors, and are not yet approved by experience, I shall not set them down here, lest I should be tedious.

§. 15.

Helmont follows, who says very well, *cap. de febr. 15. num. 7.* Then, though the Essences of Vegetables and Animals be hot, yet their volatil Salts (which you never saw) are temperate. So that if you

know how to transmute Oyl of Cinnamon, cloves, Lavender, &c. into a volatil Salt, you have got a rare Medicine, which will do much as can be expected from Simples in the Palpitation of the Heart. In this case also he highly commends Opiates: for he observed a *lithiasi* §. 17. that a certain man, who had tarried long in the *aqua regia*, fell into a terrible palpitation of the Heart, and pressed his Arms, his Mouth was turned to the right side, he slept all Night, but had extreme pain in his Arms, and grew very lean, because of the pontricity of the waters, which he had received; the mean time all external remedies that were used, proved ineffectual, and the Patient was perished, covered only by taking Laudanum for thirteen days, and then he recovered his former Strength and Habit of Body; concerning which see our Judgment below.

§. 16.

Allis, because he observes, That the Palpitation of the Heart depends upon some fault in the Blood or Arteries near the Heart, and alledges many causes, does therefore proceed to a different way of Cure. He therefore this Disease proceeds from any fault in the Blood. Therapeutick Intention will be to kindle the over watry vicious Blood, and to exalt it to a better Essence and Temper, and to increase its active Particles, that being depressed or diminished, for purpose he commends Spirituous Medicines, also saline and reous ones, and especially

ates : here are some of the Au-
thor's Receipts ;

Take of Tincture of Antimony
half an Ounce, *tinctura martis a-*
peritiva one Drachm and an half.
Mix them, and put them in a
Glas : give twenty drops twice
a day in the following Ju-
lep.

Take of Water of Aron leaves three
Ounces, Penny-Royal, Hyfop
each two Ounces, Worms, *Mira-*
bilis each one Ounce, Sugar of
Roses half an Ounce. Mix and
give it.

But If this Disease have its rise
from Obstruction of the Arteries
and polypous Concretions, saline
Medicines will be proper, especial-
ly such as are made of a volatil
salt, as Spirit of Salt, Sal Ammo-
niack, and a Tincture made with
it of *Millipedes* or other volatil
things, Spirit of Harts-horn, Soot,
Guajacum, Box, &c. But if the Di-
ease be caused by too great effe-
rescence and Acrimony of Blood,
then he orders Bleeding and tem-
perate cooling cordial Juleps. And
because he thinks the cause is con-
sulsive, he therefore mixes Anti-
asthmicks with other things, and
specificks approved by his own ex-
perience. This is one Receipt;

Take of Spirit of Amber, Sal Am-
moniack each one Drachm and
an half, Tincture of Antimony
two Drachms. Mix them, give
fifteen drops.

Then he recommends to the pru-
dent Physician the use of Frictions,
sipping glasses, Ligatures, Leeches,
omentations, Unguents, Plasters,

and Epithems made of cordial and
aromatick things.

§. 17.

Sylvius, if the Palpitation of
the Heart appears to arise from
a viscous and sharp Humour, advi-
ses the use of Alterers, Incisers, and
Medicines that temper the Acri-
mony: for which end he communi-
cates the following Medicine to
young Beginners ;

Take of Cinnamon-Water, Baum,
Borage each one Ounce, Syrup
of Borage, Bugloss, *carduus bene-*
dictus each half an Ounce, Spirit
of Vitriol of Mars half a Scruple.
Mix them. Take a spoon-
ful at a time.

And to carry off that viscid,
phlegmatick and sharp Humor, he
advises Purgatives, and he prefers
Pills of Gums above all, which best
dissolve and incide glutinous Hu-
mors.

Take of Gum-Galbanum, dissolved
in Vinegar of Squills, and inspiss-
ated again, half a Drachm, Vi-
triol of Mars, calcined to white-
ness one Scruple, Resin of Jalap
fifteen Grains. Mix them. Make
thirty Pills, for two Doses. Let
him drink some Broth two hours
after he has taken them.

And he commends the following
Apozem for the same purpose.

Take of root of Parsly one Ounce,
Aron one Drachm, Shavings of
Guajacum three Ounces, Bay-ber-
ries two Drachms, Pulp of *Colo-*
quintida one Drachm, Caraway-
Seeds two Scruples, Orange Peel

two Drachms. Boyl them in a sufficient quantity of Spring-Water, in thirty Ounces of the Colature dissolve of Syrup of Roses solutive with *Senna* three Ounces, rectified Spirit of Wine two Ounces. Mix them. Let the Patient take three Ounces of this Apozem.

He cures this Disease out of the Paroxysm gradually by Alterers and lenitive Evacuaters, giving them frequently mixt with other Specificks. And in a hot case he does not condemn Bleeding and Cupping.

§. 18.

THe *Castilians*, as I said before, hold, That this Disease proceeds from a Blood either too viscous, too much rarefied, or from a spasmodick contraction of the Ventracles. In the first case therefore the Therapeutick Indication will be, to volatilize the viscous Blood, for which end, they admit of Diaphoreticks, and all manner of volatil Salts, as generous Remedies: for instance;

Take of *Mixtura simplex* three Drachms, our anodyne Cordial Essence half a Scruple. Mix and give it. Or,

Take of *Tinctura bezoardica Michaelis* one Drachm and an half, Tincture of Antimony one Scruple, Essence of *Opium* with Amber six drops. Mix them. The Dose is ten Drops.

Cranius his diaphoretick Powder made of Antimony and Camphore will do good in this case. And so

will a Decoction of the Wood. The second Indication of it is to correct the Blood, that is rare and effervescent, by Viscous and incrassating things, ponderous Medicines; where the following Electuary will be improper;

Take of Conserve of Roses, Bugloss each one Ounce, *Stio de hyacintho* two Drachms, *Alkermes* one Drachm, Turbith of Coral one Scruple, *Sperma gemmis frigida* four Scruples, of a Stags-heart half a Drachm, Jacynth-stone prepared one scruple, *Syrupus acetosissimi* citri is sufficient. Make an Electuary. Of which let the Patient take a quantity of a Chestnut size three or the following Powder;

Take of Oriental Pearl prepared one Drachm, burnt Harts-horn powdered three Drachms, Bones of Stags-heart No. x. of the five porous Stones each half a Scruple, low Saunders one Drachm. Mix them. Make a subtil Powder, which may be given from a Scruple to a Drachm in this or some Vehicle.

Take of Oyl of sweet Almonds an Ounce, Melon Seeds three Drachms, Cinnamon-Water one Ounce, Bugloss, black Cherries each tree Ounces, *Jalapum* one Ounce. Mix them.

Their third Therapeutick Indication is, to stop the continued Motion of the Heart; to which they advise Antispasmodicks mixt with Cordials, which you may use in our way of cure.

§. 19.

It remains now, That we give our own Opinion about the same. Therefore, lest we should use Medicines like Empiricks, who as the saying is) have but one cure for every Sore, we shall, according to the Rule of dogmatical Physicians, use Method, and proceed, as near as possible, according to the Indications thereof, which are three. 1. *Curatory*, which bids chiefly drive away the Disease in the Pit, and so it uses to free the Heart and Arteries from that strange Invasion and Leaping. 2. *Preferatory*, which respects the causes out of the Paroxysm. 3. *Vital*, which has respect to the Patient's strength, which here is often very low. As to the first Indication, we draw several Remedies from the chirurgical and pharmaceutick Fountain. Among the chirurgical ones we prefer bleeding, by which, and a due observation of diet, *Avicen*, *Galen*, *Morjiti*, and others have perfectly cured several. One may therefore either bleed in the Arm or Foot, five Ounces or more: and if the Patient be fearful, *Rhazes* advises Cupping and scarifying the Back. But if the Disease will not cease so, we must reckon that a subtil, arterious blood, full of Spirits, and a volatil serum does rather abound in the Arteries, and therefore we allow of opening an Artery, provided there be an expert Arteriotomist, and the English Symplick Liquor at hand: for we have found great benefit thereby. So likewise we do not condemn Infusion, no more than our worthy friend *Ettmullerus*: But since morose and ignorant Men will

not allow of it, nor Physicians hazard their reputation upon it, this invention, to Man's great prejudice, is not yet made use of. Now follows the pharmaceutick Fountain, from which generous Remedies are drawn, so that, when the Indications are known, the cure is happily performed. First of all, that sharp or acid, viscus, and sometimes volatil peccant Matter ought to be corrected, precipitated, and some way or other eliminated and amended; to which end all such things are good, as are found to be good Specificks by Authors, such as Pearl, burnt Harts-horn, *terra Lemnia*, fragments of the precious Stones, Bezoardicks. Here is a Receipt or two for young Beginners;

Take of Ivory prepared two Drachms, Harts-horn prepared, Coral each one Drachm, occidental Pearl prepared one Scruple, Emerald half a Scruple. Mix them. Make a subtil Powder, and give it in the following or some such mixture;

Take of Water of Baum, Borrage, Bugloss each three Ounces, Raspberry, Cinnamon, *aqua cordialis Saxonia temperata* each two Ounces. Mix them, and sweeten them with *julapium rosatum*, or Sugar.

If you would make all things more effectual, so as to cut the viscid and tenacious Phlegm, and procure a fluidity, add *sal volatile oleosum nostrum*, or volatil Salt of Harts-horn: for instance;

Take of Water of Bugloss, Cinnamon, Baum each two Ounces, Essence of Amber half a Drachm, *Sal volatile o'leum nostrum* half

a Drachm, Syrup of Pearl one Ounce. Mix them.

All aromattick volatil Salts made of Cinnamon, Amber, &c. are good in this case. So *sperma ceti* is a good Medicine in absorbing any hostile Acid. To which end Tincture of Coral, made with volatil Salt of Tartar, may be given to thirteen drops.

When the Fit is a little quieted, then things that qualify, correct and discuss the acid Acrimony, the cause of Wind, are of great use: for instance;

Take of Extract of Rhubarb one Scruple, or of *extractum melanagogum*, *Pilula aloëtica*, *marocostina* each half a Scruple, *crocus Martis aperiens* three Grains, *Elixir proprietatis antiscorbuticum*, what is sufficient. Make a Pill according to Art. Or,

Take of *Massa pilula tartarea Quercitani*, de gumm. each half a Scruple, Vitriol of Mars three Grains, with Tincture of Tartar what is Sufficient. Make Pills.

Or for them that like an Apozem better;

Take of the five opening Roots, Bark of Caper-root, Tamarick each two Drachms, the capillary Herbs, Dodder, each half an handful, cordial Flowers each one Pugil, Fenil Seeds two Drachms, Polypody of the Oak six Drachms, crude shining Tartar half an Ounce. Boyl them in Water and Wine each alike quantity, what is sufficient; in a Pound and an half of the Colature infuse warm half an Ounce of choice Rhubarb

for a Night, make a moderate expression, add of *Extractum copharmacum* two Drachms, *Syrupus de pomis Regis Saporis* two Ounces, Water of Cinnamon two Bugloss half an Ounce. Mix them.

Riverius commends the giving of two Scruples of true Rhubarb tick. Or the following Composition may be made for a Physick Water.

Take of the five opening Roots each one Ounce, Rhubarb two Drachms, Leaves of *Scorodol* one Ounce, the three Cordial Flowers each two Pugils, Rind of Citron, Cinnamon each one Drachm, Fenil-Seeds two Drachms. Make them.

Or make an Infusion of Rhubarb but with Salt of Tartar, or some other alkalisate Salt. For such kind of Salts are like a Key, which unlock the Medicine, by the addition whereof the Rhubarb is better opened, as is plainly apparent, for the Waters high red colour, when in it is infused, which is more deep coloured, when the Rhubarb is infused alone.

When this is done, Diaphoreticks may come in play, to break and discuss the viscid Reliques, and soak up the Acid. Take this Recipe.

Take of *Antimonium diaphoreticum* Harts-horn prepared without Fire each half a Scruple, Magistery the Back-bones of Vipers three Grains. Mix them. Make a Powder. *Horslius* tom. 2. p. 48. has a very excellent Treacle Spiritus *aqua theriacalis camphorata*. Tincture of Opium will supply the place. Or,

Take of Water of *carduus benedictus*, *scorzonera*, Scabious each one Ounce, Harts-horn prepared without fire half a Drachm, *Pulvis Beccabunga* *Sennerti* half a Scruple, *confectio Alkermes* one Scruple, Syrup of Corai what is sufficient. Mix them.

If there be any suspicion, That this Disease has its rise from a too great effervescence of Blood, from heterogeneous and savage Salts, raising a disturbance in the Serum or blood, like as it sometimes manifests itself by Pustules in the Breast, and other where; then besides Venesection we commend temperate Coriatives and Antiscorbuticks together. To which purpose the following or some such like distilled Water will be good;

Take of root of *scorzonera*, Borrage, Bugloss, Male-Fern each one Ounce, Leaves of Spleen-wort, Sorel, Wall-Rue, Maiden-hair, Flowers of Marigold, Borrage, Bugloss, blew-flowred Trefoil, Broom, Pimpernel each one handful, Shavings of Harts-horn six Drachms, Pome-citron and Orange each No. 1. Cut the Ingredients small, infuse them in three Pounds of Wine, and one Pound of Whey of Goats-Milk for two Days and two Nights. Then add of Juice of Brook-lime, *carduus benedictus* each half a Pound, destil them in glass Vessels according to Art, and keep what you destil. Take one Ounce and an half of this with half an Ounce of *confectio Alkermes* every Morning and Evening. Or,

Take of Juice of Bugloss, Sorel, *carduus benedictus*, *beccabunga*, Bor-

rage each one Pound, Leaves of Citron, Baum three handfuls, yellow Saunders three Drachms, *lignum Aloes* one Drachm and an half, Cinnamon one Drachm. Infuse and destil them according to Art.

Or prescribe some such like thing in form of an Electuary;

Take of Conserve of Bugloss-root, Citron-rind each half an Ounce, red Roses, Rote-mary-flowers each six Drachms, Shavings of Harts-horn, Ivory each half a Drachm, prepared Pearl half a Scruple, *crocus Martis*, Amber-grise each six Grains; with Syrup of Grains of *Chermes* make an Electuary.

Or in form of a Powder;

Take of *lapis prunelle* one Scruple, Camphore four Grains. Mix them. Or,

Take of Conserve of red Roses two Ounces, Pulp of Citron three Ounces and an half, candied Citron Peel half an Ounce, *confectio Alkermes* one Drachm, prepared Pearl half a Scruple, sweet Spirit of Salt twenty five drops, Syrup of Raspberries what is sufficient. Make an Electuary.

And here Cakes made of the acid of Citron, Limons or Corinths with Sugar and a little *confectio Alkermes* are good. Or make a Powder;

Take of *species diamargariton frigida*, *electuarium de gemmis frigida* each one Drachm, *electuarium de hyacintho* half a Drachm. Mix them. Make a Powder for several Doses.

All cool Cordial Waters, that are to be met with in Authors, may be used, especially the following, which is highly commended by the Ancients in every Palpitation of the Heart;

Take of Swine's-hearts No. 2. Stag's or Ox's-hearts No. 3. Galangal greater and less, Basil Seed each half an Ounce, Mace three Drachms, Flowers of Borrage, Bugloss each two Pugils, Rosemary one Pugil. Infuse them in Malmsey Wine, and destil them according to Art.

Oftentimes in this Disease Gravel is found sticking to the sides of the Urinal, and in this case, beside what has been already mentioned, Diureticks will be good, for instance, Spirit of Salt, Crabs-eyes, *Liquor spleneticus Schroderi* made of Tartar and Nitre. Besides, since we said formerly, That the Palpitation of the Heart arises often, if not always, because the Nerves and Fibres, that encompass the Heart and Arteries, are spasmodically contracted, and then they make the Motion of the Blood out of the Heart more or less free, and contract the Ventricles of the Heart; in which Case antiepileptick Medicines, or such as are good against other spasmodick Motions, may be given, but especially Opiates, which bear away the Bell from all the rest, as I have an instance, namely a Citizen of Hanover was perfectly cured of this Disease, and continues free from it still, only by taking several times a little *Theriaca celestis Hanovienfis*. Here is a receipt or two;

Take of prepared Pearl half a Scruple, volatil Salt of Amber eight

Grains, *theriaca celestis* Grains. Mix them Make a Powder for once taking. Or,

Take of *pulvis cephalicus* *roffe* *Michaelis* one Scruple, Bone a Stag's-heart half a Scruple of Harts-horn, or Man's Blood Grains. Mix and give it.

If sweet scented Volatils be the Patient, add to the distilled Water Amber and Musk in the Matter of the Alembick. Sometimes a viscidulous salt Humor is carried out of some solid Receptacles into the Blood, and then *Capivivus* gentle Astringents, such as *stich*, &c. If this Palpitation arises from the consent of other Parts of the Womb, Spleen, *hypochondria*, &c. you must take care of the Parts that are hurt; for which *purgative* Chalybeates are good; for to kill two Birds with one stone. If this Disease proceed from peccant humors or Concretions within the Cavities of the Heart; then with the help of experienced *willis* we fly to the use of Salts, which can never be sufficiently commended in this case. If they come from Worms, Medicines that kill them are good, and *Water-Cresses* are good, and *Spasmodicks* mixt with Cordials. If it be a malignant cause, *theriaca celestis* and *smaragdina* are good. If it be a fright, bleeding is proper. As for Topicks or external local Medicines, they must be applied to the Wrists and Region of the Heart for they yield great comfort. Wherefore *Mercurialis* commends *Treacle* for a most effectual Medicine, as it was experienced in the Emperor *Maximilian*, to whom this Disease was familiar. *Riverius* describes the following Linimentum.

med. l. 8. c. 2.

Take of Oynment of Roses two Drachms, Oyl of Cinnamon, Cloves each four drops, Musk, Amber each three Grains. Mix them. Make a Liniment.

But you must abstain from these sweet smelling things in Women. There is an excellent Cordial Balsam made of Oyl of Baum, Citron and Carbuncle. Bags may well be made of Cordial Powders, with Baum or some other Cordial Water, and applied. Or the following Epithem may be applied with Scarlet-cloth;

Take of Water of Orange Flowers, carbunc. solar. Baum with Wine each alike two Ounces, Vinegar

of Gilli-flowers one Ounce, Saffron half a Drachm. Mix them.

Or a cooler Epithem in a case hotter than ordinary;

Take of *aqua cordialis frigida* one Ounce, Bugloss, Roses each one Ounce, Vinegar of Rasberries one Ounce and an half, *confectio Alkermes*, *species diamargariton frigida* each one Drachm. Mix them for an Epithem.

A Swine's-heart is very much commended by some, from which they use to destil a Water; and so the Spirit of an Ox's and Stag's heart is greatly valued.

CHAP. VII.

Of Swooning.

§. I.

Swooning or Fainting is called *Syncope*, *deliquium*, *leipopsychia*, *animi eclipsis*, *leipothymia*; by *Aurelius*, *olutio naturæ*, *defectus*; by *Seneca*, *concussura*; by *Paracelsus*, *cordis paralysis*, *fulmen microcosmi*; by *Scaliger*, *spirituum subtractio*.

Definition.

It may be described to be, an *eclipse of the microcosm*, or a sudden failure of strength from the luminosity and irradiation of the Spirits being extinct, arising sometimes from too great dissolution, sometimes from coagulation of the Blood. From the definition here given it appears, That this Disease, though it be violent enough, yet upon a small occasion it casts a Man down so unexpectedly, that he seems to be at Death's door.

Difference.

As to the differences, a Swooning or *deliquium* is much worse than a fainting or *leipothymia*; but this is not altogether so necessary, because they differ only in degrees.

Two Symptoms especially attend a *Syncope*, a coldness of the Body, and a cold Sweat; which are therefore called *syncopick*. A loss of Pulse, and a privation of Sense and Motion attend it, which does plainly intimate a total suspension of the vital Functions, where he has this Passage. He who has been taken with a *Syncope*, which in the heat of Battle has fallen up his Body, fainted, and sweating out of all his Parts, he could not hold of the next Tree that was at hand. This Disease (which seldom comes alone, but is usually accompanied with other Diseases) often occurs in chronical ones, which end in death, partly through want of animal Spirits, partly through the presence of an alkali in the Heart, or the preponderance rather of an Acid, that coagulates the Blood, and by consequence suffocates the Heart, as will more fully appear hereafter, when we treat of the Causes. Sometimes the Heart-burn to be a kind of *Syncope*: but we must take care to distinguish between a *Syncope*, which is called essential, and one which is by consent. There is a difference as we said before, not so much in Kinds as Degrees, in which respect one is of the lowest degree, and is called *eclipsis*; another of the middle, termed *leipothymia*; and a third

ther of the highest degree, called
Syncope. But we comprehend them
all under one and the same.

§. 2. Part affected.

And by what has been said, one
may easily gather what the
Subject of a Syncope or Swooning is.
It is by the common consent of
Authors said to be the Heart, that
Reservoir of Blood, inasmuch as in
the Principles of the fiery Na-
ture are contained and preserved.
Some will have it to be the Brain,
and they make it out, Because the
sudden decay of the animal Facul-
ties happens through the animal Spi-
rits retroceeding to the Brain it
self; and hence the instruments of
Sense and Motion, becoming desti-
tute of Spirits, can in no wise per-
form its actions. But if this be
taken with a limitation of the Sub-
ject of the Disease and the Cause,
one may easily clear himself of all
Difficulties. Some there are, That
acknowledge the Stomach for the
principal Subject, among whom
Helmont is chief, but how far he is
in the right, one may evidently see
in Galen l. 5. loc. aff. c. 2. But we
think, That the Heart is the
part primarily and principally af-
fected in Swoonings: for if Fermen-
tation cease, then all Influx of Spi-
rits to the Heart is denied, and on
the contrary; and the less princi-
pal Parts in my Opinion are the
arteries, through which the Blood
flows, nor do I doubt but other
parts suffer by consent, and that
they administer peccant Matter to
the Heart.

§. 3. Diagnostick.

But laying aside these prelimina-
ries, we will pursue what fol-
lows, and go to the Diagnostick.
The Signs therefore of an immi-
nent Swooning are (especially in
such as are used to it) an unthought
of Anxiety and Perturbation of
Mind, Heaviness of the Head, Ob-
servation of a strange and various
colour, green and yellow, before
the eyes, frequent alteration of the
colour in the Face, and also of the
Pulse. For no Disease in the whole
World is liker Death than this:
for a Man's Face is pale, his ex-
treme Parts cool, there is an in-
grateful and cold Sweat and Anx-
iety; at length the Soul so far sinks,
That it presently loses its power of
Sense and moving the Body; if a
Man be standing he falls down, and
his Arms hang flapping. Besides,
there comes a Mist over the Eyes,
a Vertigo, and then a faulting in
Speech, breathing almost ceases,
the Eye-lids close, sometimes there
is no Pulse, oftentimes it is rare,
obscure, and as good as none, or
formicant, the extreme Parts, as we
said before, Hands, Feet, Nose and
Tips of the Ears are cold, a cold
Sweat bursts out of the Temples,
Neck and Breast, and sometimes out
of the whole Body, which is ex-
treme weak and feeble. The ute-
rine Swooning of Virgins (for in
them it arises from the Womb, as
Helmont observes) shows it self by
Anxiety, and almost loss of Breath-
ing, the Pulse always weak and al-
most extinct, which abolition of
Pulse and Breathing Sylvius takes
for a pathognomonick sign of a
Syncope. And, as to that Matter, I
observed not long ago a wonderful
case;

case; an old Woman, for three days time before her death, had no Pulse that we could feel in her Wrists, and yet she could speak.

§. 4. Cause.

THE next thing we inquire into, is, whence all that mischief, which attends people in a Swoon, proceeds? The old *Galenists* will have the immediate cause to be a Defect of Vital Spirits, or a diminution and privation, not total (for that would be present death), but the remaining Spirits are forced to go back on a sudden out of the Body, and to run hastily to the heart, lest the strength of the heart should quite fail, which retrocession of Spirits they call Concentration. Concerning this see *Riverius c. 1. de Syncope l. 8.* who also says, that a defect of Vital Spirits happens four ways; either because Spirits are not sufficiently generated; or, when generated, they are dissipated and evacuated; or they are altered and corrupted; or finally, they are suffocated. The causes therefore of a *Syncope* are frequent, immoderate watching, sadness, anger, great anxiety, grievous sadness, bitter grief, acute Fevers, also in weakly persons, long Agues, excessive emptiness of the Body by fasting, labour, vomiting, sweat, fluxes, excessive loss of blood, and a sudden evacuation of water in the Dropsie. They maintain also, that this Disease does frequently rise from abundance of gross, crude, putrid, sharp, and biting meats and humours stagnating in the Body, which by their constant gnawing, as they say, do so obstruct the Mouth of the Sto-

mach and the Passages, that Motion is intercepted, just as when respiration is stopp'd, and they hold, that a *Syncope* is naturally caused. The Malignity and Insalubrity of the Air, also a poysonous humour vapour, communicated by external or internal part of the Body to the Heart or Stomach, also inflammation, and such like things which are able immoderately to alter or corrupt the temper of heart, stomach or spirits, cause a Swooning, since the strength of the Faculties consists in a good constitution of those parts. The Spirits alone, hurt in the manner aforesaid, communicate evil to the principal parts, and such as have consent with them and spoil their temper, and cause this Disease.

§. 5.

BUT *Paracelsus* thinks, that the cause of this Disease is the separation of the *Synovia* (which with him is the Root and Basis of Life) from the Heart, by means whereof the salutary Seas, and Clouds being interposed, suffer Eclipse, whereupon the vital Region is beset with thick darkness, and deadly shades. He also he maintains, that this Disease may rise from consent, that is, with the mouth of the Stomach (wherefore it is called *Syncope diaca* or *Stomachica*) also with the womb, namely, from foul matter sent to the heart.

§. 6.

Elmont, in a good many things exposing Paracelsus and his chymical Principles, with a secret illumination, as some passages in a treatise entituled, *Compl. mist. experiment. figment. n. 41, 42, &c.* and other where, if they be rightly examined, do sufficiently show, writes of the Arterial Spirit of our Life of the nature of a Gas, that is, is a Light and a Balsam preserving from Corruption; which is seen in a palpitation, *Syncope* and *apnoe*. For how much of the lively colour, vital light, and soft habit of the Flesh is lost in these Fits? How is the Face presently wrinkled? For the Spirit, which formerly did as it were enliven all with a pleasant strength, immediately flies away, and is changed by a strange Air. He proceeds, since the *Archæus* is in it self a Gas, of the nature of a balsamick Salt, it meet with the Air of another salt (as when Spirit of Sal Ammoniac meets with Spirit of Salt) it being easily and speedily dissipated by the Pores, forgets its charge; nor is it condensed into drops, because it is made Arterial Blood. If in fainting and death any Sweat exhale, it is the dissolution of Venal not Arterial Blood. Therefore the Vital Spirit, because it is a light and balsam preserving from corruption, begun to be compared to the light of the Sun. Now after these swoonings, the innate Spirits of the other parts, as it were smothered, are altogether kindled by the solar light of the heart, like the smoak of a Candle put out, catching the flame of another, con-

veys the flame all along to that which was put out. Sometimes the Spirit of our life, because it is a Gas, is not powerfully and quickly affected by any other Gas, namely, by their immediate contact. And he explains the Cause of this Disease more exactly *tr. ignot. Act. Regim. n. 26.* where he says, *In a Swooning there is an Anodyne poyson which disperses the Spirits, and then immediately takes away sense and motion*, which poyson, he often teaches, in other places, does lie in the mouth of the Stomach, as in a central point and root, and principle of life, of digestion of meats, and of disposing them to life.

§. 7.

Willis supposes not only a kindling, or blazing of the Blood, (by means whereof he thinks, supplies for Spirits do daily depart from the Blood) but also a nitro-sulphureous ferment, whereby he thinks a flame is really kindled. But *Lower de Corde* denies this: for though, as he discourses, there be sulphureous particles in the Mass of Blood, yet the Blood can never blaze, because of the abundance of watry particles. In a word; he concludes, that this actual deflagration, maintained by Willis, can never be without utter destruction to life. Now *willis* himself thinks, That the cause of this Disease lies in the very Blood, in as much as it is not kindled enough, nor circulated with vigor, that is, because the Blood, by reason of the Sulphureous particles too much blazed out or depressed, is become in a manner vapid and lifeless, and therefore little is kindled in the Heart and Lungs. Besides, when the Animal regiment is

is sluggish, the Heart being destitute of a full Influx of Spirits, does not sufficiently move the Blood, so as to make it ferment briskly and kindle: which any one may observe in weak People, when they come out of a long sickness, in such as have lost much Blood, or have had great Evacuations, or are consumed with Age. He also holds, That the cause of this Disease may be, because the Blood is too much kindled in the Heart, and he proves it by this, Because the Blood, through the sulphureous Particles being too much dissolved, and put into effervescence, is kindled more than it ought, and thence a too violent heat is produced, especially if it be not presently ventilated by the Air; as acute Fevers and other hot Diseases do show. Nor also does he deny, That this Disease sometimes arises from the Influx of the animal Spirits being hindered.

§. 8.

Sylvius is almost of the same Opinion with Willis, and presupposes, That our natural life depends upon the conservation of the fire and innate heat perpetuated in the Heart, and dispersed every way together with the Blood for the vivification of each Part; which fire he thinks is kindled by the fermentation of Blood in the Heart, arising from the lixivious and volatil oyle Salt of Bile, and some acid Spirit, either *lymphæ* (which he supposes to be Acid) or pancreatic Juice, so it be but mixt with the Blood: Therefore when this effervescence in the Heart ceases, then the vital Fire ceases to be kindled in the Heart, then the

Blood is no more rarefied, and is the Heart irritated to contraction, nor contracted, nor is the Blood any more forced into the Arteries, nor are the Arteries expanded, and by consequence the Pulse is either perceived in the Heart, or any where else, and thence arises Swooning. He also thinks, it may be produced by reason of too many animal Spirits flowing into the Heart, upon which the contraction and action of the Heart must necessarily cease. Furthermore, he has no question, but Blood may be bred of a volatil sharp Salt, especially in the Plague and other violent Diseases, which is overabundant or (as it often proves) the Blood may be too grumous and coagulated by an Acid, because of the diminution of the Bile or its weakness.

§. 9.

Cartes and his followers, *Landus, Brochausen* and others, they take the Spirits for the left Parts of the Blood, and think, they are also produced by rarefaction in the Heart. And ascribe this ebullition, which is a certain vital fire, lodging in the Heart, which they call the *vital and vital Flame*. Yet *Cartesius* sent. *Phys.* 7. p. 293. *Method. form. sect.* p. 130. and others deny them. The *Cartesians* therefore derive a Syncope from the contraction or stifling of this vital fire for a time. And they think it may be done divers ways, either by perverse Spirits contracted more than usual, to wit, when they are conveyed by the little Vessels which go round the Orifices of the Heart: And by these

on sufficient store of Spirits be-
denied, and the mutual stock
circulating humors (in which
either motion ought to be
diminished, and
determination into the Mus-
at that time ceasing, it hap-
s, that a Man's Body falls sud-
ly to the ground, like a Logg ;
by little and little he come to
himself again, the Clouds of the
circulating humors arising from the
ood being dispersed, and that
her quickly or in a longer time,
ording to the greatness of the
eafe, as *Broechausen* discourses
gantly, *Art. 105. in Oecon.*

§. 10.

Et us now take our own Task
upon us. And the Doctrine of
Vital Principle is necessary to be
own; before therefore we say
ich of the Disease, we will open
e. Because from thence is all
ion, Health and Life (and since
reason of contraries is the same)
also is a Disease, yea Death it
But such diversity of disa-
eing Authors about this presents
self, that you can scarce tell
on you may safely trust. Some
e are, who affirm, the Spirit
the *Embryo* is continually encrea-
in the Spirit of the Mother,
this reason ; that the *fœtus*
this not in the Womb. We
now pass by *willis*, *Helmont*,
y and *Sylvius* their opinions,
ch we gave you in their pla-
Yet their opinion is the most
ived, who, to determine the
re and existence of the Vital
it, conclude and say, That it is
most subtil or salino-sulphure-
part of the Blood, which by

its intestine Fermentation, separates
and exhales from the rest, called by
the name of Spirit. The Elaboration
therefore and Restitution of this
Vital Spirit they wholly ascribe to
the Fermentation of the Blood,
and hence they make no scruple to
derive the restitution of lost health,
but even the causes of Diseases
from it. But *Majou in respir. pag.*
m. 156. maintains a peculiar opi-
nion about this matter, where
he says, the Fermentation of the
Blood is made within the substance
of the Lungs, insomuch as the Ni-
tro-aërial Spirits, supplied by the
Air, meet with the Salino-sulphu-
reous Particles of the Blood, and
so produce a due Fermentation in
the Heart, which opinion never-
theless, that is, that the Salt of
the Air is corporally mixt with the
Blood, is called into question by
D. Bohn in tr. de Aeris influxu in
sublunaria ; but he rather judges,
it is only the motion of the Air,
which conserves the Vitality of the
Blood and the whole. We have
often said, that by Fermentation
Authors mean nothing else but
an intestine motion, in which
an Acid, and something lixi-
vial or urinous meeting together,
do put the rest of the Particles,
that make up the mixt Body, into
motion. For the Bond of Mixti-
on is from Salt ; as long therefore
as the Salts lie still without tumult
in mixt Bodies, other Particles in-
tervening, and as long as they take
their natural rest, so long Bodies
remain in their natural texture and
consistency. But if by means of
dissolution, the frame of the mixt
Body grow loose, and the Salts are
at their own liberty, and desire
presently to unite themselves, but
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determination into the Mus-
at that time ceasing, it hap-
s, that a Man's Body falls sud-
ly to the ground, like a Logg ;
by little and little he come to
himself again, the Clouds of the
circulating humors arising from the
ood being dispersed, and that
her quickly or in a longer time,
ording to the greatness of the
ease, as *Broechnusen* discourses
gandy, *Art. 105. in Oecon.*

§. 10.

Ex us now take our own Task
upon us. And the Doctrine of
Vital Principle is necessary to be
own; before therefore we say
ich of the Disease, we will open
t. Because from thence is all
ion, Health and Life (and since
reason of contraries is the same)
also is a Disease, yea Death it
But such diversity of disa-
eing Authors about this presents
self, that you can scarce tell
on you may safely trust. Some
re are, who affirm, the Spirit
the Embryo is continually encrea-
in the Spirit of the Mother,
this reason; that the *fœtus*
this not in the Womb. We
now pass by *willis*, *Helmont*,
y and *Sylvius* their opinions,
ch we gave you in their pla-
Yet their opinion is the most
eived, who, to determine the
re and existence of the Vital
nt, conclude and say, That it is
most subtil or salino-sulphure-
part of the Blood, which by

its intestine Fermentation, separates
and exhales from the rest, called by
the name of Spirit. The Elaboration
therefore and Restitution of this
Vital Spirit they wholly ascribe to
the Fermentation of the Blood,
and hence they make no scruple to
derive the restitution of lost health;
but even the causes of Diseases
from it. But *Majou in respir. pag.*
m. 156. maintains a peculiar opi-
nion about this matter, where
he says, the Fermentation of the
Blood is made within the substance
of the Lungs, inasmuch as the Ni-
tro-aërial Spirits, supplied by the
Air, meet with the Salino-sulphu-
reous Particles of the Blood, and
so produce a due Fermentation in
the Heart, which opinion never-
theless, that is, that the Salt of
the Air is corporally mixt with the
Blood, is called into question by
D. Bohn in tr. de Aëris influxu in
sublunaria; but he rather judges,
it is only the motion of the Air,
which conserves the Vitality of the
Blood and the whole. We have
often said, that by Fermentation
Authors mean nothing else, but
an intestine motion, in which
an Acid, and something lixi-
vial or urinous meeting together,
do put the rest of the Particles,
that make up the mixt Body, into
motion. For the Bond of Mixti-
on is from Salt; as long therefore
as the Salts lie still without tumult
in mixt Bodies, other Particles in-
tervening, and as long as they take
their natural rest, so long Bodies
remain in their natural texture and
consistency. But if by means of
dissolution, the frame of the mixt
Body grow loose, and the Salts are
at their own liberty, and desire
presently to unite themselves, but
by reason of material Particles in-
tervening

termixt, some Salts cannot closely unite; hence comes Fermentation: because under that union and mixture, of Salts the unitable parts are joyned, of which matter the famous *Ettmullerus* discourses admirably well in *Collegio M. SS. chymico*. And from these things it is evident, where an Acid fails, that there can be no Fermentation of the Blood, which Acid also almost all Physicians (especially *Tachenius*) prove to be in the Mass of Blood, by this, for that the Blood in its natural state is perfectly salt, and all Salt of a saltish taste consists of an acid and urinous, which two when they meet together, and that they never do without an Effervescence, give a third compounded Salt, namely, a saltish Salt, which is neither acid nor urinous, but partakes of both. Yet some deny this, and rather judge, that whatever is attributed to the subtilty and Mercurial activity in the Blood, it is only owing to our Spirits and Vital Principle; and they endeavour to prove it by this, because it happens in the first generation of Blood in the *Fœtus*, when there are no acid Particles in a Womans ovary, which, meeting with something urinous and exalted, may make up Blood; but they hold, that the saline and fat Particles, being in process of maturity digested by virtue of the Spirits, and exalted, do give it its purple colour; and they derive this Vital Spirit from a saline, volatile Principle, upon which its activity does most depend, as *willis*, *Sylvius*, and several others have done. *Helmont de aura vit. p.n.* 443. is of the same opinion, where he says, that our Spirits are only the most subtil and saline Particles of the Blood, endued with Vitality.

Barnerus in physica confirms the same, showing, that our Constitutive Salt consists of urinous and Light delights in Salt, Salt has and life in it as *Kircher*, de *Lucis* discourses: And for this reason against Fermentation, namely, That our first Vital Principle is finished without any intestine tumult, and of what is taken separates what is essential for its nature. The Vital Principle residing in the Blood is kept in light only by Irradiation, and converts into Spirit. Therefore cry it up for an eternal vertigo, all heat in our Body is from it, which yet is not hot of its own nature, but that all this heat depends only upon our Vital Spirit, which is in and without the Blood, as long as the Blood, and this Vital Spirit, is diffused in the Arteries into the Bowels, and so long the vigor and salubrity of the parts is good; but in recess of heat, life recedes, then the whole Body is cold and torpid. Therefore they ascribe all the perceptible heat to our Spirits, the motion of, as it is swifter or slower, and our Vital heat seems to be extinguished gradually. And I do not doubt but I can adapt this notion, to what I am now saying. These things therefore supposed, it is naturally evident whence Swooning, loss of life, &c. yea, death it self proceeds, namely from want of Spirit, which do fail, if either they be not in a sufficient quantity, or want of adequate matter to proceed either from our spirituous food, or (which I do) from bad digestion, or an excessive Evacuation of

weakness, Bleeding, the Lo-
 ss, &c. so also when they are
 they may be dissipated by
 or Over-purging, which things
 usually attended with fainting.
 violent Labor, Passions of the
 too much Watching, and such
 unnatural things may cause a
 defect of Spirits. And these Spi-
 rits as bright as they are, yet in
 swoonings they are darkened by
 causes; from the diminuti-
 on and extinction of which light of
 Spirits *Helmonttr. de aur. vital.*
 441. says, That all defect of
 proceeds. For it is plain e-
 nough, That the Heart is a Muscle,
 so not only the impulsive vir-
 tue of animal Spirits by the cardi-
 ac Nerves, but also a proper In-
 strument of Spirits with the Blood, is
 directed to its vibrating and con-
 tinual Motion. Like as always there
 must of necessity be a continual Af-
 fect for the altering of any motive
 power; for it is evident, That,
 in Nerves as well as Arteries are
 in any Part, Motion ceases.
 Diastole and diastole are per-
 ceived, and Blood mixt with Spi-
 rits sent to the external Parts by
 the help of Spirits. These things
 general ought to be premised;
 whence we may easily guess,
 there are several causes of
 swooning, namely, loss of Blood,
 upon the animal Spirits are
 reduced in such store; but most
 of them flie into Air. Wa-
 xation or degradation of the
 destroys the energy of the
 , and so cause Swooning.
 dissipation or oppression of
 may take its rise from a
 Acid, whereby the volatils, fa-
 cticles are in a manner sup-
 pressed, either from the Spleen,
 or, hypochondria, or some other

Part. I have often admired, why
 sweet scented things, yea, spiritu-
 ous *effluvia* from a Car, Roses, yea
 from a Maid (such an instance I
 knew in a Student) should cause
 swooning: I could never hitherto
 assign any other reason, than that
 the volatil Parts coming from these
 things, do joyn themselves perversely
 with our Spirits, and are forced
 to strive, because of Particles of a
 different condition. Swooning is
 often caused by a fright, because in
 a fright the Spirits fly very disorderly
 and violently into the whole
 and every part of the Body, where-
 fore these Spirits also fly too plen-
 tifully and disorderly into the
 Heart and Arteries, and straiten
 the Heart and Vessels, whereupon
 the Blood that is got into the Heart,
 because of the narrowness of the
 straitned Heart, cannot rarefy much;
 wherefore also it is not driven with
 any strength into the pulmonary
 Arteries, and thence into the left
 Ventricle of the Heart, and out of
 that into the Arteries; hereupon
 immediately less store of animal Spi-
 rits is separated and flows into the
 Parts, whence Swooning and Pale-
 ness arise. And because Fermen-
 tation is much abated in the Blood,
 therefore any peccant Humor, that
 abounds in the Blood, is not mixt
 with its Mass any more, but some
 of it separates by the Pores of the
 Arteries into the Mouth, where it
 causes bitterness, into the Stomach,
 where sticking by its viscosity a-
 mong the Membranes of the Sto-
 mach it causes loathing, and by its
 Acrimony vellicating the Nerves,
 it causes Vomiting when the Pati-
 ent comes to himself. And let
 this suffice for the causes, which we
 may guess at by the *juvantia* and
ledentia. Now therefore we

will proceed to the Prognostick

S. II. Prognostick.

ALL Swooning is a grievous Disease, because it is terrible ; for it carries a show of death ; yet it is familiar and frequent in melancholists and hysteric Women, and is seldom Mortal : for it goes more easily off in such, yet it leaves a languishing of all the Powers behind it. It is also Hippocrates his prediction 2. aph. 41. and in Coacis, *That they who faint often without a manifest cause, dy suddenly.* If the head of one in a Swoon fall upon one Shoulder or the Breast, if the Pulse and Breath intermit for a long time, also if the Face be green, black and blew, and if a sneezing Medicine have been taken in vain, death is at hand. Swoonings also in a Consumption denote death to be in the pot. But if one Swoon at odoriferous things, or bleeding, or at the scent of any Animals, there is no great danger ; for upon removal of the cause the effect is gone. Nor is that so dangerous, which comes from the Stomach : But if trembling and convulsions follow, death is at hand.

§. 12. Dietetick cure.

NOW having considered the ways, by which this Disease comes, and what may be foretold concerning it ; it remains, that we proceed to the three kinds of Remedies, Diet, Chirurgery and Pharmacy, comprehending under Diet, not only Meat and Drink, but according to general custom, all the Non-naturals, which being used amiss, as they may destroy a good Constitution, so, being used aright,

they are able to preserve the natural State, yea and to cure the Disease. As to Air therefore, according to Hippocrates *flatibus*, it is the greatest and chief ruler in all things which befall the Body, all care imaginable must be taken, that it may be pure, serene and lucid : And when it cannot have one so good, we could wish by Nature, it were rendered such by Art ; that it may be presently required to the raging of the Spirits, a cure must be chosen either by Nature, namely a Northern one, or by Art, to be made so by Art, i. e. by strewing the Floor with Flowers of Saffron, Py, Roses, Water-Lilly, Lavender, Plaintain, Purslain, Houndstongue. If there be need of a counteraction, it must be made by the heat of the Sun, Fire, or by other means. For Salmasius *obs.* 7. has observed, That the motion of the Air has produced a Swoon. And the Smoke of coal is as bad. Schenckius has observed, That the Emperor *Carolus* travelling in mid-Winter to Rome, and lodging in a plastered Room, which had a deal of Charcoal burnt in it, the Plaster, dyed that Night with Meat must be of easy Digestion, good Juice, moderate in quantity, whole some, taken at due times, in due order, agreeable to the Age and Sex. Gelly Broths of good, and Broths seasoned with spices, and *Galen l. 7. Method.* 6. says, That such as fall into this must be relieved by eating of stones. And this must be of special notice of, That such who are subject to this Disease must continue long fasting, but every Morning eat a little Bread.

ter. The *Drink* must be Wine; this is the most powerful repa- and restorer of our Spirits, and recruiter of all our Faculties. He, says *Helmont*, though it be yet since it is most grateful to the Palate and Stomach, is moderately in hot Diseases, a most acceptable Guest to the Spirits, and a Medicamentous Ali- ment; but Wine cooled in Ice the best way, must be utterly avoid- ed for one in *Schenckius* l. 2. de *deliq. & sync. obs.* 1. upon drinking such chill Wine after long lying at Ball in the Sun, swoon- ed. I saw the like in France upon drinking cold Beer, after playing Ball. So *Hildanus* cent. 5. *obs.* relates, how one died in a swoon upon drinking cold Water. Too much *Exercise* and *Motion* must be forborn, because many Spirits are thereby exhausted, and the sa- volatile Parts fly away, an Acid reigning, and so People have died. Sleep, the better part of a Man's life, if it be moderate and sweet, refreshes the Mind, and the whole Body, and recruits the Spi- rit, when consumed and sinking in labor, care and study, which the contrary too much watch- ing is able to destroy. But the Physician must take care to judge of it, and allow something to cure it. The Passions of the Mind, as far as possible, must be subdued by Reason, and their violence must be regulated by theological advice; for Reason is better than moderate Joy, which is more hurtful than immoderate. My Wife's Grand-father died of it, and the same thing hap- pened to a Mother upon the return of her Sons from a Battel, in which she thought they had been killed, who swooned away through

excessive Joy and died, according to *Livy* l. 22. c. 7. So *Camerarius* has collected several instances of mortal Swooning from Anger, that short Madness. Of Love, See *Riverius* l. 8. *pract. med.* c. 1. Several Practitioners have observed it from Grief, Study, Care, Sitting-up, and such other things, wherefore golden Mediocrity must be observed. Thus it comes from Jealousy, Desire, Fear, Emulation and Envy. I have known it come from the horror of a *Spectrum*, the sight of a Cat, Crabs, a Sheep's-head, and other cases of Antipathy, of which see the *German Ephemerides*. The *excreta* must observe their natural Order, otherwise they cause great inconve- nience in this Disease, for it may easily be caused by frequent and violent Purgers, Vomits, Bleeding, Scarifying, Sweat, Hemorrhoids, *Menses*, Child-bed-Purgations, Eva- cuation of Pus and Water in Apo- stems and Dropsies. We forbid the frequent use of *Venus* which killed *Cornelius Gallus*, and *T. Hatterius* in *Valerius Maximus* l. 9. c. 12. who yet will not acknowledge that for the true cause of their death; for he says, *But why should we in- vent deaths, since it was not their Lust, so much as Humane frailty, that took them away? For the end of our Lives being exposed to various and secret causes, sometimes things that do not deserve it, bear the blame of our death; when, notwithstanding, they rather happen at the time of death, than any way cause it.* I know a Man, who, when ever he lies with his Wife, Swoons, and yet he loses not his labor.

§. 13.

LEt these things therefore suffice for the Nature, Causes, Subject, Differences and Signs of this Disease. It remains, that we give you the Method of Cure; and first we will give you the old *Galenic*s. They, in the Fit, lay the Patient on a Bed, and sprinkle his Face with Rose-Water, or some other cold Water with a little Wine in it, to raise him. If the Swooning come from an hysterick Fit, they hold Castor to the Nose or *Asa fetida*, or some stinking Fumes. If it proceed from want of Food or loss of Blood, they refresh the Patient with generous Wine, and give him a Crust of Bread dipt in it, and out of the Fit they give him restorative things, as very nourishing Spoon-Meats, Gelly-Broths, and such things. If it come from poysonous Vapors bred within a Man or brought from without, then they give various Alexipharmacks with good success. But when it comes upon drinking of Poyson, they give a Vomit; and if a heat be felt in the Stomach, they give Milk, Butter and fat Broths. If it come from over-purging they give *Venice Treacle*, *Mithridate*, and other Opiates inwardly, and apply them outwardly. When too much Sweating causes it, they cure it by pouring cold Water, or Rose-Water, or Vinegar on the Face, or by applying cold Epithems. But if the Fit come from Terror or Fear, as it often does, they order Blood-letting, and give spirituous things; they also recall the suffocated Spirits to the out-side of the Body by Frictions, Ligatures, Cupping, &c. they use

Shouting aloud, Sneezing, and ling the Mouth, Nose and Ears. But out of the Fit they use another Method, namely, they use the Humors obedient to Nature Preparatives, and in a cold Cause they use these following, *Citron-Rind*, *Pomegranate*, *Apple*, *Oxymel simplex*, &c. in a hot Cause they use *Sorel*, *Violets*, *Roses*, *Wood-Sorel*, *Bugloss*, *Water-Sorel*, &c. After these things they use a Solutive (unless the Disease come from over-purging) to carry the peccant Matter. Their Remedies in this case are these following, *Manna*, *Cassia new drawn*, *barb*, *Tamarinds*, &c. they give gentle Clysters. When it comes from viscid Phlegm or poysonous humors, they give Vomits, which bear all strong Evacuators. *Antients* are of use in the Fit and out of it, such as *Frictions*, *Ligatures*, *Cupping*, &c. Then they give to Strengtheners; in a cold Cause these things are good, *Carduus*, *dulce*, *diambra*, *ulivarius*, *anis*, *Oyl of Cinnamon*, *Wine*, all Cordial Waters, *Wine of Betony*, *Citron Rind*, *Tormentil*, *Cinnamon*, *Mace*, *sweet*, and Syrops made of the same, *Mithridate*, *Venice Treacle*, *antidotus Matthioli*, and several other things. In which case they also use externals; for example, *Epithem* for the Body of *Cinnamon*, *Saffron*, *liquor* of *Camphire* and *Water of Baum*, *Ros*, *Camphire*, *Joran*, or they apply *Bag of same* to the Heart. But in a hot Cause they use Coolers, such as *ple distilled Waters* of *Citron*, *Flowers*. *Job. Baptista* highly commends distilled Water of *Flesh* in this Disease, and

have it to be of the same strength with the Flesh it self, from which it is drawn, though it nourish less. A group of Limons, Apples, Pomegranates, *species diamargariton frigidum*, and Conserve of the four Cordial Flowers, are good. Externally they apply a Cordial Epithem made of Lignaloës, Sanders, Citron Peel, with Water of Borrage, Buglofs and Cloës, or they make Bags of the same.

§. 14.

The Chymists, for comforting the Vital Spirits, and all the Spirits of the Heart and Body, do prefer Essences and Tinctures before Spirits on many accounts. For this purpose they commend Gold, as the highest *arcanum*, and they ground their Opinion upon a Philosophical foundation, namely, that when the Sun is in the Heavens, the Heart in an Animal, Wine among Vegetables, the same is Gold among Minerals; and they laugh at Scaliger's Opinion, viz. That the Nature of Gold is very far distant from our Nature, and therefore that our Heart cannot in any wise be relieved by it. But whatever others say, Paracelsus with his Father Hermes, extols *aurum potabile*; and to Gold he subjoins Mother of Pearl in form of an Oyl or Balsam, Essence of Saffron, Baum, &c. He also commends Antimony, which he calls the restorer of all the Faculties in the Body, and he in several places compares its solar Sulphur to Gold; and he magnifies *arcanum sulphuris*, *aqua vita*, Emerald and Salt of Pearl (which Borellus in his *Basilica Chymica*, says, is a most noble Cordial, and in temperature and operation next to

potable Sol.) *Arcanum* and Quintessence of Pearl in Hartman are good for these uses, and *flores margaritarum* and *corallorum* in Schroder Pharm. l. 3. c. 6. Tinctures of Coral prepared with various *menstrua*, Liquors of Gemms, Rubies, Granates, Topaz, Jacynth, and others are highly valued by them. These are among the Compound Waters, *aqua caponis*, *carbunculi*, *aurea*, *confortativa usitata*, Spirit of Roses, Treacle, Vitriol camphorate, Spirit of Wine with the diaphoretick Salt of Mylius Antid. lib. 4. c. 2. Spirit of Soot, *terra sigillata*, &c. also Oyl of Cinnamon, Amber, Mace, *lignum rhodium*, &c. Salt also of Pearl is good, and of Coral, *angelica*, *scordium*, volatil Salt of Harts-horn and Vipers, also Amber dissolved in Spirit of Wine, of which see Beccherus Supplem. ad Physic. subterr. p. 79. Also Wines of Buglofs, *Angelica*, Hippocras, and strengthening *claveta*, such as Quercetan has in his Pharm. rest. lib. 1. c. 9. will be of good use in this case, of which various Receipts might be given, but we leave them to the Judgment of the Physician.

§. 15.

Helmont, when his Head ran round, and he staggered, with fear of fainting, cured himself by a gentle Vomit; for so he cleared the Stomach of the dregs, whereby that turning *Idea* was impressed (for he suspects the cause to ly in the Stomach) afterwards, when he had eaten some Mear, and drunk a little Wine he grew better: But when he found a Relapse, he perfectly cured himself with Sulphur of Vitriol. And for taking away

the anodyne Poyson, that disperses the Spirits, and is urgent in this Disease, he commends divers spirituous and volatil things, whereby the Spirits grow clear, and the light of Life shines forth again.

§. 16.

Ullis distinguishes Cordial Medicines into two kinds, namely one which chiefly and immediately affects and kindles the Blood and animal Spirits; another which allays the immoderate Effervescence of the Blood and Spirits. In the first Class he places such things as exalt and kindle the Spirits and Blood; such as hot compound distilled Waters, Tincture of Saffron, *elixir vite Quercetani*, Tincture of Salt, Tartar, Steel, and other hot things; such as *aqua mirabilis*, Cinnamon, Cloves, Orange Peel distilled with Wine, to which volatil Spirits may be added. In the second Class he puts cold distilled Waters, temperate Cordial Waters, all Acids, nitrous things, &c. Here is a Receipt;

Take of odoriferous Apples, Raspberries each six Ounces, *confectio de hyacintho* one Drachm, Syrup of Violets one Ounce, Spirit of Salt, what is sufficient for a grateful Acidity. Or,

Take of Spring-Water one Pound, Juice of Limons two Ounces, Sugar one Ounce and an half. Mix them. Make a Julep.

Also cordial things abounding with a volatil Salt may beneficially be given both in Fevers in respect of the Blood, and in Swoonings and sudden Faintings, such as

Spirit of Harts-horn, Treacle, Spirit of Blood, of Mustard, Spirit of Sal Ammoniack, and of Vipers, *crystallum minerale*, and *chelis*, Flowers of Sal Ammoniack, *bezoarticum minerale*, &c. are they the meanest Cordials whose Basis is an alkali Salt, as oriental Bezoar, Coral, Pearl, testaceous Powders and Stones, concerning all which things you may consult the Author himself, in the discourse of Cordial Medicines.

§. 17.

Sylvius, in fear of a Swoon and lighter Faintings, recommends the following mixture, by spoonfuls;

Take of Water of Mint two Ounces, *aqua vite Matthioli* one Ounce, Tincture of Cinnamon half an Ounce, Oyl of Cloves six Drops, Oyl of Scurvy-grass one Ounce. Mix them.

The same excellent Period upon daily experience comes in this case volatil Salts and stick Oyls, things that easily dissolve and incide every Viscid, and temper and correct every Acid and Austere. Sometimes also he prescribes the use of things that dissipate Vapors and Wind. And especially if the Patient be liker one dead than alive, so that he can neither open nor shut his Mouth, nor swallow as he should, then will now and then put into the Patient's Mouth by a Tunnel ten drops or more of the foregoing incorporated by circulation of spirituous things.

§. 18.

The Cartesians commend all spirituous saline volatil things, which can kindle the vital Flame, such as are all spirituous Waters, namely of Cinnamon, *carbunculi*. All that are cordial and odoriferous, Spirit of Citron, Spirit of Musk, Amber, Civet, Cinnamon and Cloves (yet here it must be observed, that Oyl of Amber and Cloves, joyned with spirituous and camphorate things act more effectually) and several other things of the same nature, which subtilize the Spirits, and kindle the sacred Fire. Of which more afterwards.

§. 19.

Place among Cordials all those things, that illuminate and make volatil Man's Spirits, as the Rays of the Sun do in the large Universe, and that are able to raise and quicken the Spirits, and join themselves with them, and withal maintain an equal Fermentation of the Blood. When therefore a Swooning or sinking of Spirits, proceeds from an excessive dissolution of the Blood, that is, from the abundance of an *Alkali*, sulphureous and spirituous things, yet moderately acid, but volatil, must be given, that a due consistency may be restored to the Blood, and the deficient Spirits and Fermentation may return. For which purpose I should advise strong Wine-vinegar volatilized with Spirit of Wine, *tinctura bezoartica Michailis*, Cinnamon Water, Spirit of black Cherries, or Roses with Amber. For

the sake of Beginners therefore take the following Receipt;

Take of Water of Cinnamon half an Ounce, Vinegar volatilized with Spirit of Wine one Ounce, Spirit of Roses with Amber one Drachm, Syrup of Cinnamon six Drachms. Mix them, and give a spoonful or two at a time.

Cinnamon, Musk and Amber (which last the English say, is found in the Bellies of Whales) excel all other cordial and strengthening things. The following corroborating Balsam may be made of these odoriferous things.

Take of Amber one Scruple, Musk half a Scruple, *confectio Alkermes* two Drachms, Spirit of Roses, black Cherries each three Drachms, *aqua cordialis Herc. Saxon. elixir vite Matthioli* each one Ounce. Let these things be mixt and circulated for eight days or more in a Vessel well closed. Then let the Balsam be filtered and kept for use. Or,

Take of Water of a Stag's-heart, Baum with Wine each two Ounces, Cinnamon with Borrage one Ounce, *confectio Alkermes* one Drachm, Bone of a Stag's-heart twelve Grains, Syrup of Clove-gilly-flowers one Ounce. Mix them.

But if a volatil Acid be peccant, it will be advisable to add things that precipitate or bind an Acid; for which purpose this following is not the worst.

Take of Water of Borrage, Bugloss, Roses, Baum, of Juice of Citron

Citron each three Ounces, Cinnamon two Ounces, oriental Pearl prepared half a Drachm, burnt Harts-horn prepared three Drachms, *saccharum perlatum* half an Ounce. Mix them. Make a Pearl-water. Or,

Take of *aqua cordialis Herc. Saxon.* three Ounces, Essence of Baum one Drachm and an half, Tincture of Coral prepared with Spirit of Harts-horn half a Drachm, Syrup of Borrage Flowers six Drachms. Mix them. Give a spoonful at a time.

Or the following Powder;

Take of Oriental Pearl prepared half a Drachm, red Coral, Bone of a Stag's-heart each one Drachm, the five precious Stones half a Drachm. Mix them. Make a Powder. The Dose one Scruple. Or,

Take of *magisterium cordiale* two Drachms, *Cornu cervi solare* one Drachm, Bone of a Stag's-heart one Scruple. Mix them.

For all things may here be made use of which can imbibe an Acid, especially if the Swooning proceed from a coagulation of Blood in the Heart. To which end, the noble and experienced *Dn. Major* commends Spirit of Sal Ammoniack, that most powerful volatil *Alkali*, combined with Spirit of Wine camphorate, and Oyl of Amber, for a saline oily Spirit is made of it. Spirit of Harts-horn or Soot joined with Camphore will do the same. And in this case I must commend *Sachsius* his saline volatil restorative Liquor, for restoring and illumina-

ting the Sun of the Microcosm which Remedy is usually made of Spirit of Cinnamon, artificially joined with distilled Oyl of Amber, Juniper and volatils of Harts-horn. And upon this occasion I am willing to commend my corroborating Essence.

Take of Spirit of Wine with Amber rectified half a Pound, rest Salt of Tartar one Ounce get it over by destilling the Spirit. To which rightly extracted add of Oyl of Cinnamon, Amber as much as they will take up. Then add of Essence of Amber made with Spirit of Rectified Ounce, Spirit of Sal Ammoniack rectified one Ounce and mix. Make according to Art corroborating Essence.

The taking of a few drops of this Essence, greatly refreshes Spirits, dissolves coagulated Blood, destroys any Acid, and maintains an equal Fermentation and Motion in the Blood. In the coagulation of the Blood also *Sperma ceti*, found in the Brain of a Whale, and mixed with other Cordials, taken frequently, is reckoned a second Remedy in Swooning. But if the Acids seem to climb up from the lower Parts, and if any thing acrid and corrosive appear, especially in Women, the Medicines must be more spirituous and sulphureous than the former line. But in burning Fevers, Lipothymies arising thence, Cordials fortified with Acids are good, because they restore and centre the Spirits exhausted by volatil Medicines, and dissipate the Sweat; for which end these following are good, namely, *tura simplex*, the Acid volatil

of Vitriol. Here is a Receipt ;

Take of Conserve of Pulp of Citron two Ounces, red Roses one Ounce, *confectio Alkermes* half an Ounce, sweet Spirit of Vitriol twenty five drops, *syrupus acetosatis citri* what is sufficient. Make an Electuary. Or,

Take of *aqua cordialis frigida* two Ounce, Water of Baum, Juice of Citron each one Ounce, *confectio Alkermes* one Drachm, Water of Pearl one Ounce, *tinctura bezoartica Michaelis* twenty drops, Syrup of Pomegranates six Drachms. Mix them.

Water of Cinnamon and Mint is good in a Swooning from the Stomach, joyned with other Stomachicks both Internal and external ; *spiritus stomachicus Mynsichti*, *Angeli Salæ*, and *stomachicum Poterii* are good. But out of the paroxysm a gentle Vomit must be given, to carry off the peccant viscid Matter ; and in this case various Absorbents and Precipitants are good. And in all Swoonings the *aqua sanitatis* of the Ancients is good, and *Glukrad's* Water of Man's Blood in his Notes upon *Beguin. lib. 3. c. 1.* also Essence of Man's Blood in *Faber Myrothec. Spagy. lib. 1. c. 8.* Essence of Civet, *ibid. c. 26.* When these things will do no good, I think we ought with the noble *Ettmullerus* to proceed to Infusion both of volatil Acid, and volatil alkalick Liquors, as occasion shall require. Among Externals we commend divers Epithems applied with a scarlet Cloth. Here is a Receipt or two for young Physicians ;

Take of *aqua carbunculi* one Ounce and an half, *naphæ* one Ounce,

Powders for a cordial Epithem one Drachm, Spirit of Citron Peel one Drachm and an half. Or,

Take of *acetum bezoarticum* one Ounce, Spirit of Citron one Drachm. Mix them for the Wrists.

Or Bags filled with cordial Powders and wet in these or the like Liquors, may be applied. Or make the following Liniment ; or some like it ;

Take of Balsam of Amber, Cinnamon, *Angelica*, Cloves each half a Scruple. Mix them. Make a Balsam to anoint the Region of the Heart. Or,

Take of destilled Oyl of Citron, Baum each half a Scruple, liquid Amber eight Grains. Mix them with a sufficient quantity of Oyl of Nutmeg.

Or for anointing the Pulses ;

Take of destilled Oyl of Baum, Citron each half a Scruple, *carbunculi* six drops, *lignum Rhodium* four drops. Mix them.

The Region of the Heart may be rubbed with some volatil oylly Salt, or some volatil Spirit.

Balsam of white Amber rubbed on the Nose, also Balsam of Amber and Cinnamon given to smell to, and several other things raise a Man out of a Swoon.

If it be a Woman Patient, and there be any suspicion of hysterick Fits, hold a piece of burning blew Cloth to her Nostrils and other Anti-hystericks. Also Spirit of Sal Ammoniac prepared with Quicklime

lime is good here, because it best penetrates through the Nostrils to the Brain; it must be held to the Nostrils, and Essence of Castor must be given inwardly.

Here also all things are good both inwardly and outwardly, which are good in an Apoplexy; *aqua vite* may likewise be poured into the Mouth.

The Urine is often made turbid in this Disease, because the mixture

of the Particles is disturbed, which is restored by Sudorifics.

If one fall into a Swoon after over-purging, Spirit of Treacle and Cinnamon-Water will be very proper, or Treacle may be applied outwardly to the Stomach.

In a Lipothymy upon Bloodletting, putting Salt into the Mouth and rubbing the Tongue with it will do good, as *Horstius* says.

The End of the Second BOOK.

B O O K III.

Of Diseases of the Abdomen.

C H A P. I.

Of the Heart-burn, Squeamishness, Belching, Vomiting, Rumbling in the Guts, Heat of Stomach, and Want of Appetite.

§. I.

BEfore we go about to describe the Diseases of the Abdomen, it will be worth the labour, yea, it is of absolute necessity, to premise a few things concerning the Nature and Use of the Stomach. And before we proceed to the preternatural state, we will briefly touch upon the Natural, namely the abstruse work of Chylification, to the end the Faults of it may be more accurately known. The greatest part of the Ancients were of Opinion, That Chylification was performed by the heat of the adjacent *viscera* after the manner of Elixation, that is, as Flesh is boiled in Water, instead whereof drink is, so they think Meat is boiled in the Stomach. Others have thought, That

this Chylification was performed by a certain fictitious chylifick Faculty. Some of them think, That a certain melancholick Humor is poured out of the Spleen through the *vasa brevia* into the Stomach, by which acid Liquor, they would persuade us, the Food is dissolved: And some of the Moderns are of this Opinion, among whom is *Helmont*, that great Philosopher by fire. For he says, That without all controversy both Meat and Drink are dissolved in the Cavity of the Stomach into a diaphanous Cream, and he adds, That this is done by virtue of a Ferment manifestly Acid, which is borrowed from the Spleen. But a more curious Anatomy has destroyed this opinion at one blow, which shows, That in live Animals Blood indeed does descend from the Stomach through

through the *vasa brevia* to the Spleen, and is poured into the splenick Branch; but that nothing can come the contrary way, that is, from the Spleen to the Stomach; because the communication of this splenick Acid by the *vas breve* is hindered by a Valve. And so there is an end of that Figment. Our Opinion is, That Chylification is performed by way of Fermentation, with the help of Animal Spirits, and a certain acid Volatil, that is, a salino-ammoniacal Humor, contained in the Stomach, perhaps with the concurrence of the Pancreatick or some other Juice. First of all therefore the Meat should be well broken by the Teeth, as by Nature's Pestils, and when it is mixt with the *saliva*, and as it were imbued with the first Ferment, (for the *saliva*, as *Sylvius* testifies, *Disp.* 1. p. 8. consists of Water, Salt and Spirit, whence its penetrative and fermentative virtue has its rise) It is sent down the Gullet to the Stomach, and there, by that juice, which is proper and domestick to the Stomach, is transmuted into a sort of pulraceous Liquor, not unlike to Barly-Cream. This Ferment in Man scarce exceeds the quantity of an Ounce, and sticks in the folds, or innermost Coat of the Stomach, being carried thither from the minutest Glands, with the Animal Spirits, which dissolves and by its volatility subtilizes the Meat well chewed, and moistned with Spit-tle, and well dilured, and as it were macerated with drink, and it promotes the act of Fermentation like Baker's Leven, it deduces into act the Salts partly acid, and partly volatil, wherewith the food abounds, and by their means encreases the Fermentation, and at length

it changes all into a milky Juice sometimes Acid, sometimes volatill which we call Chyle. And by this way we must note this, That the Ferment in live Animals is thin and clear; but in dead ones it is always viscous. For it is certain That a sort of acid Juice is always found in the Stomach of such as are in health, which the good Women know how to save from the Stomachs of Beasts when they are killed, for Cheese-runnet: And before sowre belching, before the Food well turned into Chyle, shows much. Besides, the authority and reason of one most conversant in the knowledge of natural things, that Archphilosopher Hippocrates confirms the same, who, *apud Galen.* 6. says, *In Fevers and long labors if sowre Belching supervent, which was not there before, it is good; because the weakned Stomach revers its Acidity, whereby it is able to dissolve the Meat into Chyle, and by consequence the Patient is in health.* And experimental Philosophy will prove, That the Ferment ought to be volatil, or to consist of a certain volatil Salt; for it cannot be denied, that whatever should dispose any fermentable subject to Fermentation, must always be of the nature of a volatil Salt, and the case is the same, as when Hops or Spice are added to Beer or Ale (as is usually done in Brewing Ale) whereby the Fermentation is heightened in both. So the volatil *effluvia* of the Vine in the younger ferment wines afresh. Thus much of the natural state, we will now proceed to the preternatural.

From the depravation thereof of this Ferment (a turgescence and *Orgasmus* of other humors arising thereupon; together

the Crudity and Coction of the (same) all those Diseases of the Stomach are derived, which now we will more particularly illustrate. For what is that we call the Heart-burn, but a sad sensation of the mouth of the Stomach, which is very nervous, arising from sharp juices, that so dissolve the continuity by violence? What is vomiting, but an exclusion of something found in the Stomach, at the mouth, by the perverse peristaltick motion of the Stomach and Guts adjoining, caused by sharp and heterogeneous, malignant Particles? Squeamishness indeed depends upon Volatil Particles, but not very sharp, so that It and Vomiting differ only in degrees. Heat of the Stomach is produced, when the subtil and sharp Particles of Bile, that is in the Stomach, cause pain and heat in the Stomach and *oesophagus*. Belching is an affection of the Stomach. Rumbling of the Guts, depending upon sharp, acid and viscid Particles, yet Volatil also. Want of Appetite, which is called *Anorexia, Astia, Apositia, cibi fastidium*, &c. is a depravation of the Ferment of the Stomach arising from divers preternatural causes.

§. 2. Part affected.

From the definition it will not be difficult to gather, what is the part affected in these Diseases. and it is reckoned to be the Stomach by the consent of almost all authors. In the Heart-burn we take the Orifice of the Stomach, which is wholly made up of Nerves, and looks like a net of Nerves, yea and the nervous Coat of the Stomach for the Subject. But we take

all the nervous little Fibres which make up the Stomach, for the subject of Vomiting, as we do the Cavity of the Stomach for the subject of Squeamishness and Belching. And we take the folds of the Stomach, in which the Ferment usually sticks, for the subject of want of Appetite. Concerning the secondary Subject, and the Parts which have consent with the Stomach by the communion of the sixth pair of Nerves, we shall add nothing; for they may be many: of which notwithstanding we may better, according to the law of Method, treat in the causes.

§. 3. Diagnostick.

NOW we will proceed to the doctrine of Signs, which since it is the foundation of right Cure, we may do well to lay it down aright. The Pathognomick Sign of a Heart-burn is pricking or biting about the Pit of the Stomach; and perhaps, when there is a great gravity and distension in that sensible, nervous Part, namely the Orifice of the Stomach, there may be a great Anxiety of Heart, difficulty of Breathing, as in an *Asthma*, Swooning and *Vertigo*: for the Spirits being enraged cause these various Symptoms. Squeamishness also, and want of Appetite arise from a great Mass of viscid Humors, which make dull the Ferment of the Stomach, the Animal Spirits also, which communicate Heat and Tone, are then dissipated, and as it were desert their party, that is, the Stomach, whence it cannot otherwise be, but the deserted Party must flag. By reason also of a volatil Bile, a bilious Vomit often attends this Disease; by these Signs we judge

judge the Disease is idiopathick. As for a sympathick Heart-burn, the proper Signs of the Hurts and Diseases of the Parts, by whose fault it is caused, will make it known. And the Signs of a Vomit are manifest of themselves; yet oftentimes Head-ach, *Vertiga*, trembling of the under Lip, biting in the Mouth of the Stomach, frequent and plentiful Spitting, do precede, and if the cause ly in the Stomach, and the Disease be idiopathick, trouble and pain in the Stomach will evidently precede; but if it be sympathick, then a preceding pain in the Head, Womb, or some other Part, will give you further information. And in all excessive vomiting there is Anxiety of Heart, Head-ach, Swooning, and sometime Convulsions. As for Belching, it is either sovre or nidorous. The first is peculiar to Melancholists, the second to bilious and feverish Persons. In rumbling there is Wind, which shows it self by the noise it makes, and it puffs up the Belly. Want of Appetite presently shows it self, to wit, when the Patient is averse to all Meats, so that the very naming of it turns his Stomach, and the sight of it makes him quite sick. Heat of the Stomach is shown by bitterness in the Mouth, and when Pain and Heat is felt, and also a thin moisture like Water flows off the Stomach.

S. 4. Cause.

BEfore we proceed any farther, it will be requisite to search the true Causes, out of the Opinions of divers Authors. The Ancients held, That the immediate Cause of the Heart-burn is a sad

Sense, or biting pain under Cartilage of the Breast-bone. the conjunct Causes are sharp, pituitous, bilious, portaceous, and Humors, gathered in the Stomach, or sharp Wind, and Vapors arising out of the Cavity of the Stomach, the Mouth of it, which irritate. To which causes they also add excessive Heat or Cold. Among antecedent causes they reckon gross Meats and Drinks, which are vitious and poysonous, such as horary and unripe Fruits, &c. which use to distend the Stomach, just as the Wind does the Gall, the Colick pain. They lay the internal cause of Vomiting, Squeamishness (which, as we see in the definition, differ in degrees; for they rise from the same causes) is a dissolution of the lubricity of the Stomach, arising from some heterogeneous Matter contained in the Stomach, whether it be pituitous, bilious, or melancholick, or mixt of these. So Belching shows, That such a Matter sticks in the Stomach; a bitter Belching, an adust Matter, a bitter one, yellow Choler. And they derive the Heat of the Stomach either from yellow Choler, or bilious Vapor, carried to the Mouth of the Stomach and the Tongue. But they will have want of Appetite to arise from some Intemperature, Obstruction of the Meats Veins and Mouth of the Stomach, from a Mass of viscid and pituitous Humors, which they lay, arises from satiety, or from bilious Matter, or some melancholick Humor, distending the Stomach, and takes away the Appetite.

§. 5.

The Chemists say, That saline Seeds, namely mucilaginous tartareous, many fetid Sulphurs; few Mercurials, cause such Disorders in the Stomach. For if mucilaginous, dirty, aluminous, styp- and bituminous Stuff cover Sides and Wrinkles of the Stomach, there follows, according to Hippocrates, an oppilation of the Spirit of life, the Minister of all natural Actions, which being as it were taken captive and put in Chains, cannot exert its strength in the Food it receives, nor fit for the separation of the Nutrients from the Excrement, whence Offices of Concoction are slow-performed, and weakness of Stomach, Inconcoction, short Winded-Compression, and a thousand Torments follow, as B. Petrus de Medicina, Hermet. says. Then see on §. 17. These Impurities being oftentimes tainted with acrid Qualities, infect the medicinal Spirits of the Stomach to the same; whereby the Food is changed into a dissentaneous mass, produces divers Ristings and Vomings. If they have vomitive, corrosive or antimonial Faculties, they cause Vomiting and Squeamishness: But when the Mucilages are stronger Tinctures of Salts, Vitriol, Tartar, &c. then more and more painful Morions and Passions are raised, especially at the upper Orifice, which is endued with exquisite sense, there arise strange Appetites, Heats, Prickings, Erosions and Bitings in the Stomach, like Colick-pains. And when the Sulphur is kindled and

dissolved in the Stomach, it must need cause great Heat and Burning in the Stomach.

§. 6.

Helmont supposes, That Crudity is in Fault. If the Meat therefore receive not both Ferments, that is, its own and the limentary aright, then it encreases the sourness, and there is an excess of Appetite, attended with a portrick corrosive Belching. For he thinks, Belching is either insipid, acid, portrick or nidorous. A very weak Stomach belches out insipid; a stronger Stomach belches, acid, nidorous, bitter, sharp, &c.

He thinks, Heart-burning is caused in the Mouth of the Stomach, as in a central Point; and the root and principle of life, of digestion of Meat, and of the disposition thereof to life, namely, while the Pylorus, like the furious Womb, moves its excentrick Blas. And it is wonderful, as Grembs says, That the Pylorus should have so great a power; that it alone is able to raise such various Scenes of Tempests. For in Vomiting the Pylorus must always of necessity be shut; and Helmont contends, That through the pertinacious closure of it the Humor contained in the Stomach sometimes turns eruginous, whereupon a violent, yea, sometimes a Mortal Vomiting follows. For he tells, how he opened the Body of one that died of vomiting black Stuff, and how he found the Pylorus exactly closed, and nothing else amiss. A Vomiting therefore in Helmont's Opinion is caused two ways, either by the proper Blas of the Pylorus, and then it is without Pain, or from some Provocatives, then indeed

indeed it is by the *Pylorus*, but not by its proper Motion, and therefore is troublesome. A bilious Vomitus arises, when bilious Matter is poured by the Parts adjoining, into the Stomach, then the *Pylorus* being shut, it corrupts the more, and the Contents are by the Quality of the Ferment made blew or green. So if the Ferment of the Gall be out of order, Heat, Ebullition and want of Appetite, Belching, Squeamishness and Vomiting arise: But if the Ferment of the Spleen be exorbitant, then the Vomitus is bloody. The *Pylorus* therefore is either mad of it self, or is irritated by an occasional cause, which often proceeds from some fault in the Gall, when it has in it a pontick or austere Salt, which easily straitens the *Pylorus*. Therefore when the fury of the *Pylorus* is pacified, the Vomiting will cease; of which we shall speak in the Cure.

§. 7.

Willis in the Heart-burn blames bilious, sharp, alkaline, lixivious and heterogeneous Particles carried to the Mouth of the Stomach, which do there twitch, corrugate and distend the nervous little Fibres, and by means of the Animal Spirits, cause a sad sensation. For he makes no question, but vomiting is a violent convulsive Motion of the Stomach, which therefore, he says, does arise from the explosion or great expansion of the animal Spirits, falling violently upon the Fibres of the Stomach, which Fibres are presently puffed up, and consequently abbreviated, so that the sides and bottom of the Stomach are drawn neerer to one a-

nother, and upwards likewise towards the left Orifice, so that the Contents are forced into the *œsophagus*: Whence it comes otherwise be, but that all the Fibres which are able to irritate the Nerves implanted in the carnes of the Stomach, must produce Vomiting more or less trouble. And these Provocatives may be either Humors, Vapors, Menses, Physick or Poyson, so they be sharp. Yet with *Helmholtz*, he says That Vomiting can be caused by the shutting of the *Pylorus* according to *Willis* it is easy to say, whether, what the causes of belching, Rumbling in the Guts, Squeamishness, and want of Appetite are from what has been said above, and it will appear more plain when we give our own opinion.

§. 8.

Solvius in the Heart-burn Solution of Continuity, the immediate cause, and blames a fixt, sharp Ferment, made of various Causes, and sharp Vapors of the same nature, that cut and irritate the Mouth of the Stomach, a very sensible Part, and so cause cardialgic Pain. But he thinks the immediate cause of Vomiting to be the peristaltick Motion of the Stomach and Guts inverted by sharp, acid, austere and lixivious humors carried to the Guts, and inversion of the Motion, according to his Opinion, begins usually at the place of insertion of the *Ductus's*, that is, the Pancreatick. And Gardenius says Poyson, putrid and corrupt humors, and other things help to produce vomiting remotely. But he

Vomiting of Blood to come from the Spleen or Liver, as most think, but only from the *Pancreas*. He firmly holds, That the cause ofretching is Wind, distending the Stomach, and at length let go at the Mouth with violence, and from viscid Phlegm. He derives the loss of Appetite, and Heat of the Stomach from the same cause, namely a pituitous, viscid mucus, and sometimes from too much Bile. He derives loathing of food from vitious Exhalations, placed in the small Gut by a violent fermentation, and rising to the Mouth of the Stomach. And he ascribes it both to Bile, and the greenish Juice and Phlegm, that pass into the small Gut, and are out of order, and so cause these disorders.

§. 9.

The Cartesians hold, That in the Heart-burn there is a sensation, which being present to the Nerves to the Soul, is moved: For the sharp or acid particles, that corrode, or cut, or with their sharp Points, are more firmly fixt in by degrees, and so part the nervous Fibres in sunder, and shake them by motion, which while it is contrary to the Principle of the Nerves, sensory is violently moved by an unusual thing, and the mind receives with aversion a sad sensation, threatening and often causing a Breach, which perception, related to the Sense, we call Pain; upon the sharp Particles of food being sometimes carried upwards to the nervous Origin of the Stomach, and vellicating that upper Orifice too much,

produce an intolerable Sense. And they think, That Squeamishness and Vomiting, and other Symptoms arise, if sharp and viscous Particles, either kept there, or carried with the Blood by the Arteries into the Stomach, do not correspond in their Figures to the Pores of the Stomach, and so do violence to the Filaments of the Stomach, whereby the Animal Spirits are irritated and hindered in their Motion where they should go: whereupon the Motion is inverted, and the Stomach must as it were prove abortive. They will have the Heat of the Stomach to come, while the sulphureous volatil Particles, carried to the Gullet, pierce the membranaceous Parts, and raise a Heat.

§. 10.

Our Opinion is, That in these Diseases the Animal Spirits, being enraged, shake the little Fibres of the Stomach, and so the Stomach must of necessity be overturned, and all its Contents be thrown out of doors. In a Heart-burn therefore, according to the Opinion of all Physicians, there is a Solution of Continuity, while an improporcionate Object either resides in the Stomach it self, or comes from some other place into it, and distends, separates and parts in sunder the nervous Fibres of the Mouth of the Stomach; whereupon the Spirits that ly in the Fibres are moved disorderly; and so Pain is caused, which is either felt, pricking, rending, cutting, bruising, heavy, distending or burning, according as the peccant Matter; or the Ferment of the Stomach is more crude, fixt or sharp; whence

also Pain is believed to be in that Part, from which a vibration of the nervous Fibres results to the common Sensory. And if there be an acid *mucus*, or a very sowre Ferment, joyned with much viscid Matter gathered by Indigestion, the Heart-burn must of necessity thence ensue. Bile also is preternaturally poured out of the *duodenum* into the Stomach, which by reason of its sharp, lixivious, alcalizate Particles, wherewith it abounds, is oftentimes able to vellicate the Fibres, and cause this sad Pain; therefore the Heart-burn comes most upon an empty Stomach, when the *menstruum*, because it has no Object upon which it may act, acquires a greater Acrimony from the sharp, saline Particles of the Bile, called into the Stomach, and consequently pierces the sensible Fibres, which vibration is carried to the common Sensory. For Salts especially, whether sharp, acid or salish, lodged either in the Mass of Blood or in the Serum (as one may see in scorbutick People, who are often troubled with this Disease) and then getting head about the Mouth of the Stomach, and so by their rigid Points growing troublesome to the Membranes and nervous kind, are usually the causes of this Disease. If therefore in Fevers the balsamick and mild Particles be dispersed or inverted, and if on the contrary, lixivious, bilious and sharp ones be exalted and translated to the Mouth of the Stomach, the Heart-burn must of necessity follow. Also volatil, sharp and caustick Salts may easily produce this Disease, as we see in the Plague and other malignant Diseases, if they be gathered about the Mouth of the Stomach, and get

dominion there. Sharp Wounds ascending to the upper Orifice of the Stomach, in form of a Ulcer, while it violently insinuates itself into the nervous Fibres, and much distends and vellicates them, may also cause this Disease. I observed, the Heart-burn was cured in a Woman by Worms voided at her Mouth.

Now we will declare in particular, what our Opinion is concerning Vomiting. Now it is the enemy above said burden the Stomach, and the *Pylorus* being obstrusted thereby, and a violent Contraction of it being violent Vomiting must of necessity follow. For the Stomach whatever is troublesome, whether it offend in a saline, lixivious Acrimony or in Acidity. If there be a vitious *mucus* or sharp Ulcer stick in the folds of the Stomach, or if its Ferment be depraved when the Ferment is spoiled, things that are taken, are not rightly contempered, grow sour, and so the nervous Fibres, which make up the rough inner Surface, are by little and little softened with some acid Tincture, and by reason of the Incongruity of the Object, are vellicated till (the carnous Fibres, being on them, being drawn inward, sent) by means of the Acid Spirits they are contracted; and a small Motion is made, which comes a Squeamishness and Disturbation of the Stomach; and afterwards it grows stronger and stronger, whence comes Vomiting.

Here, by the way, I mention some strange things, which have been voided by Vomiting. *Matthai*, a Physician of *Persia*, *Misnia*, drank some Water

drawn out of a Well, into which a Cat had been thrown, upon which he found great pain in his Stomach, and having taken a vomit, he brought up a Cat. A woman in my Neighbourhood vomited above an hundred Lizards and died presently. I knew another, who vomited Frogs. And Aristotle knew one that vomited a Wheel.

If Vomiting come by consent, from a perverse Motion of regurgitation out of the upper Guts into the Stomach, or from an Artery or Vein breaking in it, then uncorrupted Blood is brought up by Vomit without Coughing. For the Blood is turned into an *orgasmus*, gets out where it can. And any acid Cruor mixed with a kind of caustick Salts, falling into the Guts, or the Arterious Vessels, uses to produce bloody Stools and Vomit. So in Women or Maids, by reason of the stagnation of the *Menses*, Blood sometimes is discharged into the Stomach, which through tarrying there is brought up clotted, and so when Evacuations suppressed are able to cause this Disease, of which we have discoursed sufficiently before, when we treated of Spitting of Blood. Women with Child do vomit also at the beginning, not only through consent of the Womb with the Stomach; but because the foul matter cannot be purged by the ductory of the Womb, and not being able to wait the time of Birth, it returns, and takes upon it the nature of an Excrement, and because it has a soweriness in it, it is cast out by Vomit and other ways.

In Belching I think an acid, though Paste is peccant, whether with the *Galenists* you will call it Phlegm,

or with *Paracelsus* a dreggy Tartar; it is all one to us, who will not differ about words, so we can but agree in things. For if this viscid Paste be fermented with a vitious Acidity, a lixivious *Alkali* also concurring, to wit, Bile (by whose provocation a flatulent Gas is belched up, as may appear by the intense Acidity of Meat taken in too great a quantity, when corrupt, or at length brought up) the Digestion of the Stomach is ill performed, and its perfection is worse finished in the *intestinum duodenum*, whereupon, whatever is taken and contained therein, swells with that fermentative Acidity, like Paste of Meal; and Wind is raised, by whose impetuosity straitness of the *præcordia*, Shortness of Breath, Restlessness, want of Sleep, swelling of the *hypochondria*, and Rumbling all over the *Abdomen*, are bred; as the very day that I writ this, I observed in a Man, upon drinking too much Water. Therefore a volatil acid crudity causes acid Belchings; and if there be but the least Portion of volatil Bile, that rises to the Stomach, the Belchings which are raised thereby, and distend the Stomach, either bite, or corrode, and so cause a heat of Stomach, and sometimes they smell of fried Eggs, sometimes of stinking Fish, and sometimes of bitter Bile it self. Belching shows a diminution of Heat, and a depravation of the Ferment in the Stomach: for the fermentation being weakened, all that is taken, degenerates into an acid, viscid Paste, that quite destroys the Appetite; and at length by the strength of Fermentation turns to Wind, which according to the Crudities in the Stomach is either ridorous, acid

or insipid; and this Wind does oftentimes with exquisite Pain exasperate the Sense of Vellication and Tension, which that viscid and slimy Matter, that oppressed the Stomach, had caused. This same Wind also being carried impetuously through the Cavity of the Guts, and hindered from passing, returns the same way, and meets with more, which sculing and rebounding cause a noise and rumbling in the Guts.

Squeamishness, hardness of Concoction, loss of Appetite, and other weaknesses of Stomach, proceed from want of an acid or saline, seminal Ferment. For the Ferment is often buried and suppressed by the crude Particles of the Food, whereupon the Appetite must needs fail and be destroyed.

§. II. *Prognostick.*

LET us now go to the Prognostick, which gains a Physician much honour. And first of all, as to Life and Death, we observed a mortal Heart-burn, attended with strange Symptoms, in a certain Counsellor of *Nassaw*. Nor is it without danger, when accompanied with Swoning, coldness of the extreme Parts, and cold Sweats, according to *Hippocrates*, *sect. 4. aph. 65*. The Heart-burn in Fevers is bad; and in pestilential ones chiefly, in the Small-Pox, and malignant Dysenteries it is often fatal, especially if there be the Hiccough also. For this Disease ends either in Swooning or Convulsions in such as are near death. And they dy quickly, who have their Stomach full of Worms. On the contrary, these Signs following are of better event.

The Heart-burn out of a Fever a Sign, That one should vomit, as *Hippocrates* advises, *4. aph. 17*. Out of burning therefore the Heart-burn is dangerous, but it usually ceases when the Bile is discharged by vomit. But when an Inflammation and Eschar is made by a malignant Cause or caustick Bile, this case is dangerous, and is not to be over; therefore the Physician must be careful. Yet it often affords intervals, and is in the nature of a chronical Disease, which is not so dangerous. Sometimes it degenerates into a quarantaine, as the noble *Horstius* l. 1. *cap. 11* observed. According to *Galien*, If a Blister or Swelling in the right Leg of one troubled with the Heart-burn, be deadly. Vomiting may sometimes be a good, and sometimes a bad Sign. For if it come once a Day in a Fever, it is good, otherwise it is bad. Vomiting after a Black Passion is bad. The Heart-burn after Vomiting is bad, and redness of Eyes, according to *Hippocrates* l. 7. *aph. 3*. Vomiting of a black Choler in the beginning of any Disease, is Mortal; and the same in opening of flux and effluvia of Bodies, that died of this Disease, found nothing in the Stomach but a black Liquor, and the Mouth shut; which is a Sign, That any one vomit a blackish Liquor, corrupt Blood, the case is bad. A green and livid Vomiting with stink, is Mortal. Shivering, Heart-burn, Reaching, a Vertigo, Vomiting do usually denote Vomiting to be at hand. They preserve their Health, who force themselves to vomit; for they make a new Stomach, and better

age upon themselves. They that vomit every day, and after Meal, are apt to fall into an Hæctick: for they are bilious and therefore malignant. Also every symptomatick vomit in a malignant Fever or plague, and in other Diseases is hurtful; on the contrary, every critical vomit is good. *Hippocrates* says, That is the best vomit, which is Bile and Phlegm mixt together. A vomit coming upon a looseness cures the Disease, as *Hippocrates*, *sect. 15*, testifies.

As to the Prognostick in Vomiting of Blood, from what Cause or how soever it proceed, it is always dangerous. Blood gushing out in great quantity endangers either sudden death, as I have observed, or coagulating on the Stomach it turns sour, whence afterwards proceed Swoonings and Faintness, just as when it is coagulated in the Vessels of the Heart, precordial Suffocations follow. And there is great danger in that which proceeds from a suppression of the *Menses* (for according to *Hippocrates*, *l. 5. aph. 32*, vomiting of Blood in Women ceases, when the *Menses* come) than if it come from the Spleen, Liver, pancreas, &c. After Vomiting of Blood oftentimes a Dropsy follows, as I observed in two Citizens of Hanover, who died of a Dropsy. Therefore that is a most true saying of *Hippocrates*, *l. 4. aph. 4*. All manner of Blood coming upwards is bad. But if the Constitution be strong, then oftentimes it does little harm. So I knew three Citizens of Hanover, who fourteen or fifteen Years ago vomited at times above three Quarts of Blood, and notwithstanding they are alive and well.

Hippocrates makes mention of Belching, *l. 6. aph. 33*. Those that belch sour are not subject to a Pleurisy. Also, *l. 6. aph. 1*. Sour Belching coming upon long loosenesses, which were not there before, is a good Sign. In loathing of Meat or want of Stomach, Children are more hurt than Elder People. Also a bad Stomach is not so hurtful in the beginning of any Disease; as when the Disease is over, when an Appetite is the only way for restauration, otherwise the Body must shrink to nothing.

§. 12. Dietetick Cure.

NOW we will proceed to the Cure it self, and first of all to diet. The Air therefore must, as far as is possible, be pure and temperate, yet a little inclining to heat, because the Stomach cannot bear the ambient Cold, because of its many nervous Parts, as *Sennertus* shows, *l. 3. prax. part. 1. sect. 2. c. 15*. Every Air must be avoided, which is tainted with sharp, poysonous, arsenical, antimonial and saline Particles; because an acid, saline Disposition, if it do not produce, yet it may encrease the Disease.

The Meat, if in any case, ought here especially to be of good Juice, and easy of Digestion and Fermentation, and should be seasoned with divers Spices, Majoran, Thyme, Anise, and Seeds of Paradise. All Meats, that are viscid, windy, sharp, over-salt and smoak-dried, must be forbore; such as are all Pulse, Radish, Onions, Garlick and Chestnuts, which according to *Swalbins* create the Stomach much trouble, and loosen the Mouth of it with innumerable Belchings, and also

Garden-fruits. Sweet things likewise, Milk and fat things are hurtful here, which often acquire Acidity, and are able to produce the foresaid Diseases, especially Heat of the Stomach. Many mistakes also may be committed in the quantity, order and manner of taking. For heaped in too great a quantity they over-whelm the Ferment of the Stomach. Variety of Meats also taken at one Meal is hurtful. The *Drink* may be good Wine, such as the Patient has been used to. But not too much of it: for as excessive gormandizing spoils the Stomach and its Ferment, so guzzling of Wine, and especially Brandy, soaks up the Acid in the Stomach; as one may try by mixing Spirit of Wine with Acids, which turn sweet. And this is the reason why we see stout drinkers eat but little, contenting themselves with a Crust of Bread for a whole day, and at last they fall into a Dropsy for their pains.

The Motion of the Body must be moderate and seasonable, and in the Fit a Man must rest. But all Motion presently after Meal is to be blamed, in as much as it dissipates the more volatil Particles of the Meat, hinders the subtilty of the Chyle, wastes the Spirits, stirs the Humors that are quiet, and deduces latent Wind into act. Riding in a Coach also, and Sailing in a Ship are bad, and often cause Vomiting, because they pervert the Animal Spirits; and make them flow disorderly to the Stomach, whereupon it is convulse; as all who first go to Sea are for several days vexed with Nauseousness and Vomiting. The sight also of filthy things may cause Vomit by imagination.

Here we advise Sleep, and to supply the want of it by Opium.

Among the *Passions* of the Mind Joy should be chosen; for more violent, such as Anger, Melancholy, Grief, Care and Solitude should be utterly avoided, and layed with pleasant Disposition Musick. For care must be taken that the balsamick and sweet Consistency of the Mass of Blood be not lost, and that it be not made sharp and lifeless; for so the Ferment in the Stomach is debilitated.

As to the *excreta* and retention, the Patient must go once a day to stool: for if the Excrements of the Belly be preternaturally retained, they send putrid and sharp Vapors to the Stomach, and grow into a Cholera, whereupon also the Stomach may be inverted by consent of the Parts, and a thousand troubles attended. The case is the same in the obstructions of the *Menses*, Hemorrhoids, &c. and if these excretions be not correspondent to the Nature, they must be procured by Art.

§. 13. *Pharmaceutical Cure.*

THe cure of the Heart-burn, Squeamishness, Vomiting, Churning, Rumbling in the Guts, and Want of Appetite, in the Judgment of the Ancients, varies according to the variety of causes; which yet in general they thus manage. In all of all they make the Humors obedient to Nature by preparing Medicines, as they call them. In cold Cause they give Symplic Mint, Wormwood, with Warm Sage, Majoran, Betony, &c. In a hot one they give Symplic

chory with Rhubarb, of Juice of
acutifolius citri, with Water
 Cichory, Sorel, Plantain, Bu-
 barb, &c. Then they endeavour
 carry off the Humor by Evacua-
 tions, which with them are Rhu-
 barb, that both purges and binds,
 and strengthens the Stomach, Syrup
 of Roses solutive, of Cichory with
 Rhubarb. Sometimes they allow
 gentle Vomitories, such as white
 Scordium, and a Decoction of Ra-
 barb, that is, if there be thick and
 viscid Humors, because they in-
 crease also: for oftentimes Vomiting
 is cured by Vomiting. To this end
 they prescribe Suppositories and
 Clysters, for revulsion of the Hu-
 mors. In the Heart-burn and vio-
 lent Vomiting they fly to Opiates,
 namely Venice Treacle, requires Ni-
 tro-muriaticum Romanum, and the
 dose, giving about a Drachm. Then
 they strengthen the Part with cor-
 roborating things, such as Syrup
 of Quinces, sowre Pomegranates,
 Marmos, Conserve of Roses, Marme-
 ade of Quinces, *terra sigillata*, Bole
 Armenick, Pearl, Mastich, and a
 hundred other things which may
 be met with here and there among
 Practitioners. Externally they ap-
 ply a Cataplasm of Leven kneaded
 with Vinegar and Juice of Mint;
 they also anoint the Region of the
 Stomach with Oyl of Quinces, Ro-
 man, Worm-wood or Mint; or they
 make a Cataplasm of the Pulp of
 Quinces and Worm-wood Leaves
 applied warm to the Stomach.
 They advise also a Plaster in this
 made of Mastich, Frankin-
 cense, Mint Leaves, Oyl of Tur-
 pentine and Wax. In a violent
 Vomiting they sometimes clap a
 stopping-glass to the Stomach. And
 they go almost the same way to
 work in Vomiting of Blood. These

are generals. But in the Heart-
 burn they write, That these things
 are specifically good, *aromaticum*
rosatum Mesues, *diamargariton fri-*
gidum & calidum, *latifolius Galeni*,
diacinnamomum, *rosata novella*, Trea-
 cle-Water, Conserve of Borrage,
 Bugloss, *Angelica*, Citron-Peel, &c.
 If the pain be greater after Meal,
 they conclude the Disease comes
 from viscid Phlegm; but if it be
 greater before Meal, that then Bile
 is the occasion, especially if there be
 a bitterness in the Mouth; and so,
 according to the diversity of this
 or that Humor, they give Purges.
 If the Appetite be excessive, then
 they blame acid Phlegm, for which
 any one may easily prescribe Me-
 dicines. And the lost Appetite is
 according to them easily recover-
 ed, if you do but observe a differ-
 ent cure according to the diversity
 of the Causes. If any one have
 eaten over-much, they order him
 Fasting or a Vomit, and especially
 purging sowre Syrups. If Bile of-
 fend, they advise *Hiera* and Rhu-
 barb, and to eat sowre Sawces with
 their Meat. But if Phlegm abound,
 they order divers Phlegmagogues,
 Clysters to cleanse the Guts from
 all *mucus*, and divers Incisers, of
 which Books of Practitioners are
 full, so that we shall insist no lon-
 ger on them.

S. 14.

THE Chymists in a Heart-burn,
 besides vomitive Medicines do
 advise mitigating and stupefying
 ones, namely, *laudanum Paracelsi*.
 Some of them make an Essence of
 rectified Spirit of Wine and Oyl of
 Juniper very effectual in this case;
 and they do not omit other destil-
 led Oyls both inwardly and out-
 wardly.

wardly. In Squeamishness and Vomiting they use the following things. Their Master *Paracelsus* in comment. ad aph. 2. Hipp. says, That Vomiting must often be cured by Vomiting, if the Patient's strength will bear it, for by it all the heterogeneous things are cast out, which were the cause of it. Extract of Hellebore is good; afterwards the Vomiting is stopt with Spirit of Wine, fragments of the precious Stones and Coral. Oyl of Vitriol given in Malmsey Wine or Conserve of Roses or Mint, stops Vomiting, and so do Oyl of Mastich, Tincture of Gold, *Laudanum opiatum*, and a Crust of Bread dipt in Wine and Water, and strewed with Spices. Powder of a Pumice-Stone taken in Wine is said to be an excellent Medicine. They commend also the giving of *Gilla Theophrasti* at the beginning. Externally their Master commends Leven boyled with Juice of Mint and Vinegar to the consistency of a Plaster, applied hot to the Stomach. And in this case, after Medicines have been used in vain, they advise the setting a Cupping-glass with much Flame to the Mouth of the Stomach. In Belching and Rumbling of the Guts they advise discutient and attenuating things, such as Dill, Anise, Caraway, Fenil, *daucus, anmi, seseli*, Bay-berries, Galangal, and all Aromaticks, Chymical Oyl of Aniseed, Basil, Mint, *Laudanum*, &c. given in Wine. For procuring an Appetite, they prescribe beside Vomits, natural sower things taken, such as Spaw-Waters, and artificial Medicines, extracted from Metals, Minerals and Vegetables; and they are their Salts. For since Salts are the chief thing in communion and digestion of the Meat,

therefore a Stomach is best cured by Salts. Hence they write, That of Worm-wood, Mint, *neditus*, Pearl, &c. are good, also magnify saline Spirits, of which namely and *Venus*, *Paracelsus* de grad. says, That the Stomach is preserved by Galangal as by the external Stomach. And so they commend the distilled Oyls of Aniseed, Worm-wood, Mint, Cummin, Pepper, Clove, both inwardly, and applied outwardly with Oyl of Nutmeg, excellent Medicines. He also scribes *Opium*, Costmary and taury. *Quercetan* observes, the following Powder is a strengthner of the Stomach;

Take of *Arum* Root prepared Ounce, common *Acacia*, prepared each half an Ounce, Crabs-Eyes calcined two Ounces, Cress-Seed one Drachm, the weight of them all, then, give a Spoonful in Morning.

He also extols *cyocus Mariae* Tincture of Mummy.

§. 15.

H Elmont, in the Heart, when the Mouth of the Stomach is charged with a viscid Phlegm, besides Vomits, Crabs-eyes, and other things, soak up the Acid. So also in vomiting, for pacifying the Stomach, he advises the use of cold Water, whereby he takes the violence of the raging acid is composed quickly, safely and pleasantly. But if the Patient be troubled by an occasional one that is, by a tenacious or acid

then to soak up this viscid A-
 mity, he commends Crabs-eyes
 in some Vehicle. Nor do
 vomits always obtain their certain
 effect, but sometimes the rage of
 the Pylorus is exasperated by them,
 as Grembs observed in a Barber, l.
 4. 1. §. 3. de stomach. defect. But
 vomiting of Blood happen in
 such as have an exorbitant Fer-
 ment of the Gall and Spleen,
 for it Practitioners apply Re-
 medies to the Spleen, Grembs
 has found the following Plaster do
 good. Take of Flour of Barly,
 Acorns, Root of Comfrey each one
 Ounce and an half, Blood-stone
 two Drachms, red Saunders a
 Drachm and an half, Mastich one
 Drachm. With Plantain Water
 and red Wine, each what it suffici-
 ent, make a Plaster. Nor does the
 fore-said noble Author condemn O-
 piates, which wonderfully abate
 the fury both of the *Archæus* and
 Pylorus, and are approved Medi-
 cines in all these Diseases.

§. 16.

Ulcer, as well in the Heart-
 burn, as in Belching and
 slow Vomiting, that depend up-
 on a corrupt Ferment, besides uni-
 versals, advises divers absorbents,
 such as Crabs-eyes, Amber, Cinna-
 mon, Ivory, &c. and he highly
 commends the virtues of the follow-
 ing Powder.

Take of *Arum* Root prepared six
 Drachms, Powder of *acorus*,
 Burnet each half an Ounce, Crabs-
 eyes three Drachms, Cinnamon,
 Salt of Worm-wood, Man's-skull
 prepared, Powder of Coral, Ivo-
 ry, Vitriol of Mars each one
 Drachm. Mix them. With a

sufficient quantity of Sugar make
 a Powder. Or,

Take of Powder of Ivory, Crabs-
 eyes, Coral each two Drachms,
 red Sanders, Cinnamon each
 half a Drachm. Mix them. The
 Dose is half a Drachm.

In a sharp and hot Vomiting ac-
 cording to him, Medicines endued
 with a sower vitriolick Salt are pro-
 per. Some Salt of Worm-wood
 may be given in Juice of Limon.
 Or,

Take of red Coral prepared two
 Drachms, Salt of Worm-wood
 one Drachm and an half, Juice
 of Limons three Ounces; let
 them stand in a large Glass. Add
 of Cinnamon-Water two Ounces.
 The Dose is a Spoonful or
 two.

Iron and Nitre Waters are good.
 Nor does he despise Opiates and
 other Narcoticks, taken inwardly
 and applied outwardly, as there is
 occasion. He also applies Plasters,
 Unguents, Oyls and stomachick
 Fomentations to a weak Stomach.

§. 17.

Silbius in the Heart-burn, Vo-
 miting, Squeamishness and
 Belching, that have their original
 from viscid, sharp Humors, gives
 gentle Aromaticks in the Flit. Here
 is a Receipt;

Take of Water of Fenil, Mint each
 one Ounce, Cinnamon six
 Drachms, Syrup of Mint half an
 Ounce. Mix them. Let the Pati-
 ent take a Spoonful or two be-
 tween whites.

And

And if the Vomiting be very violent, and extreme painful, he does not forbid, but rather advises, the adding of a Grain or two of *Laudanum opiatum* to this mixture.

He cures Vomiting of Blood, which comes from some broken or eroded Vessels of the Stomach, Guts, *pancreas*, or some other Part, by the well known, and most approved mixture in all Excretions of Blood, which follows;

Take of Water of Plantain two Ounces, Cinnamon six Drachms, distilled Vinegar half an Ounce, red Coral prepared half a Drachm, Dragon's-blood half a Scruple, *laudanum opiatum* three Grains, Syrup of Myrtles one Ounce. Mix them.

If there be also any fear of the coagulation of the Blood, he adds to the foresaid mixture Crabs-eyes or diaphoretick Antimony; or *balsamus sulphuris amifatus*, if there be Pus.

And for discussing of Wind in Belching and Rumbling of the Guts, which lies in the Stomach or Guts, he approves of the following mixture or some such like.

Take of Water of Mint, Fenil each two Ounces, *aqua vitæ Matthioli*, *spiritus carminativus Sylvii*, each half an Ounce, Spirit of Nitre twenty drops, distilled Oyl of Mace six drops, *laudanum opiatum* three Grains, Syrup of Mint one Ounce. Mix them.

For he prefers Spirit of Nitre before all other Carminatives, because it both incides Phlegm, corrects Bile, hinders the breeding of Wind, and disperses it when bred.

And all Aromaticks and things infused with a volatil Salt do the same.

In heat of the Stomach he recommends absorbents, Chalk, Crabs-eyes, Nutmeg, and several other things of the like nature.

The loathing of Meat, and from the sick Man's prejudice, be cured by clearing his Mind of all prejudice, and by gradual leading him to the loathed Meat. But this loathing depend upon the fault in the Humors, the cure ensue, if the peccant Humors be corrected or purged away. Vicious Humors may be corrected by the Medicines above-mentioned and then we may purge them either by Vomits or by things that purge downwards, especially if the be very tough.

§. 18.

NOW we and the Carminatives will encounter this Disease and communicate those Medicines which we have experienced to be good, for the sake of young Physicians, not of the old, and who have arrived at the highest point of our Art, who need not our information, some of whom, out of prejudice or envy against younger Physicians, had rather remain in error, than embrace the truth of these, and if (which is very rare) they do embrace it, they distrust it.

If therefore the Heart-burn arise only from the impetuous violence of the Animal Spirits, we select various antispasmodicks, and machick Specificks mixed with them, to which we usually add the odor of native Cinnabar, and

man's skull, or such like. Thus
 immediately cured a Coop-
 who was troubled with the
 heart-burn, and great Anxiety, on-
 by taking a Dose of carminative
 with a few drops of the a-
 dine. He cured another by giving
 a precipitating Powder made
 of Shells, Crabs-eyes, Bezoartick
 powder, Oyl of Cloves and *Opium*.
 If it proceed from a viscid and
 gross Matter, that puts the Animal
 spirits into disorder, we commend
 dissolving things, yet appropriate
 for absorbents are for the
 most part general, and too univer-
 sal Alterers, and therefore are not
 directly opposite to special Di-
 cuses, nor sufficient for their cure.
 These therefore, according to the
 variety of the specifick Acid, that
 offends, and the more or less glu-
 tinosity of the material cause, ac-
 cording also to the different nature
 of one or more, solid or fluid Parts,
 that are primarily or secondarily
 affected, together with the contrary
 sort and disposition of Humors,
 that are altered more or less, the
 complication also of divers Disea-
 ses, and concurrence of more or less
 troublesome Symptoms, do vary most
 frequently in these very things, as
 co-indicants; and one must cure as
 they were by particular means, and
 these must be dextrously joined
 with Absorbents, as the most ex-
 periented Ettmuller, of pious Me-
 mory, has observed in *disp. Præci-
 pitationum usu & abusu*. In the Heart-
 burn therefore we have found
 these things do good specifically,
 Crabs-eyes, Amber, burnt Harts-
 horn, Ivory prepared without
 fire, &c. If an over viscid and te-
 nacious Matter vellicate the nervous
 Fibres, then spirituous and more
 dissolving things are proper. Many

of our Patients have recovered by
 the following mixture;

Take of Water of Mint, Basil each
 one Ounce, *tinctura anodyna*, Tin-
 cture of Amber, Cinnamon each
 half a Drachm, Oyl of Mace
 two drops, Syrup of Mint half
 an Ounce. Mix them. Give it
 by spoonfuls.

To which mixture I have with
 very good success added a Grain
 or two of *Laudanum opiatum* or *the-
 riaca cælestis*, and for Women we
 use to mix something of Castor.
 Nor would we neglect the applica-
 tion of divers aromack Oyls, Pla-
 sters and Unguents to the Stomach
 outwardly. But if Wind causes
 oppression about the Heart, or
 Heart-burn, distension of the *ab-
 domen*, or difficulty of Breathing,
 then carminative things are
 good.

In Squeamishness and a spasmo-
 dick Vomiting, if there be a Mori-
 on and gnawing at the Stomach,
 and painful Motions and Contra-
 ctions of the nervous Fibres from
 a violent perturbation of the Ani-
 mal Spirits, we fly to Opiates, and
 especially to *laudanum cydoniatum
 Hofmanni*, or our *laudanum aromati-
 cum* in form of a Pill. And we
 may add either Treacle or *confectio
 Alkermes*, or a drop of Oyl of Cin-
 namon or Mint; for all these gently
 assuage the Membranous, and sen-
 sible fibrous Parts, to which we
 often join Cinnabarines, not omit-
 ting volatil oily Salts, and we add
 tartarificate Essence of *Opium* to li-
 quor cornu cervi succinatus. *Pulvis
 stomachicus Poterii* will do well in
 this case, which follows;

Take

Take of *pulvis stomachicus Poterii* half a Drachm, Shells prepared, native Cinnabar each one Scruple, *crocus Martis saccharatus* half a Scruple, *Laudanum opiatum* one Grain. Mix them, and give it in Wine. It will open much.

Oyl of Nutmeg also will be very proper here, because Oyl tempers acidity, and by its spirituosity, and penetrance opens the Pores, especially if Salt of Wormwood be joined with it.

If too volatil Bile rise to the Mouth of the Stomach, and cause Vomiting, to stop this give a Scruple of Salt of Wormwood with half an Ounce of Juice of Limons, and a little Salt of *carduus benedictus* alone. Bile also may be purged with Rhubarb, as there shall be occasion. You may make such a Potion.

Take of choice Rhubarb three Drachms, Mace half a Drachm, Salt of Tartar one Scruple. Infuse them for a Night in Plantain, Mint and Cichory Water. To two Ounces of the Colature add of Syrup of Cichory with Rhubarb half an Ounce, Cinnamon-Water one Drachm. Mix them.

In enormous scorbutick Vomiting, where the Animal Spirits are moved violently, you may add Opiates to Martial Medicines, and others impregnated with a sharp and penetrating volatil Salt, and so we shall do a great many good things at once. So the *sal volatile oleosum Sylvii*, or volatil, sulphureous things, as all bitter and aromatick things, give great relief in any Vomiting. But what plenty

soever there is of other phlegmatick Remedies, whereby Vomiting may be cured, I shall add more, besides a few Externals which have often good effect. There are divers Plasters of *Tacamah Mastich*, *de crusta panis*, Treacle or Leaven kneaded with Vinegar and applied to the Stomach. The following Cataplasim seldom fails.

Take of Chocolate one Ounce and an half, *confectio Alhermus* half a Drachm, Oyl of Nutmeg by expression two Drachms and an half, black Balsam of Peru one Drachm, Cinnamon one Drachm. With a sufficient quantity of Malmsey Wine make a Cataplasim.

Divers aromatick Oyls may be applied to the Stomach, Such may be applied by it self, and several other things, which Practitioners will show you.

As for Vomiting of Blood, these things will be proper, which are advised for Spitting of Blood, especially if an acid Crudity mix with a caustick *Alkali*, falling upon the Guts and sanguiferous Vessels. The preternatural acid Taits and Stomachs do not only ly in the first way, but they further penetrate the Body, as *Helmont* says paradox. 4. 9. Oftentimes there wanders in us a certain mineral Salt dissolved, plainly excrementitious, (as dissolved Tartar) cause bloody Stools and Vomiting, then *Alkalibents* mixt with divers *Seypicke* will do good, such as *Tinctura Sytica Zwelferi*, and our *Tincture of Corals*, and a thousand other things mentioned before; which I have no mind to repeat. Sprinkle some sympathetick Powder on all that is brought

ing up; and let Blood if there occasion. See the rest in the paper, Of Spitting Blood.

By Belching and Rumbling of Guts, for correcting the peccant Acid, to check the violence of the Wind, and to hinder the passing of it, we advise carminatives, or things to discuss Wind: For instance, a Drachm of dried Orange-Peel, or the Water of it drawn with Malmsey Wine, a Decoction of it, Conserve of Chamomil Flowers, Oyl of Aniseed, Caraway Orange-Peel, and *elaeosacchara* made of them.

Take of Water of Fenil, Chamomil, *aqua carminativa* each one Ounce, *Spiritus carminativus*, *Sylvestris*, *thymica celestis* four Grains, Spirit of Nitre dulcified five drops, Syrup of Cinnamon one Ounce. Make a mixture, to be taken by Spoonfuls.

Our stomachick Salt in form of a Powder is an excellent Medicine, which is made of the *caput mortuum* of Spirit of Sal Ammoniac with Salt of Tartar and Salt of Worm-wood, it causes an Appetite. Also our Tincture of *terra peruviana* made with Spirit of Wine is a great arcanum with us in all diseases of the Stomach. Wine of Worm-wood, Mint, &c. is good to digest this acid Phlegm. Or.

Take of Conserve of Worm-wood, lesser Centaury, Rosemary, Mint, *confectio Alkermes* and Spirit of Salt. Mix them.

Elixir proprietatis Paracelsi and *Elixir catholicum* or *polychrestum* will be proper. This acid Acidity will also be cured by giv-

ing things, that temper or concentrate an acid Spirit, forbearing Purgatives, till the acid Humors are tempered, and reduced to the nature of Serum, which then nothing hinders, but you may purge off by Hydragogues. We get out this acid Phlegm, that produces Wind, at the usual passage by carminative Clysters, namely Aromaticks, which are best able to check its violence and impetuosity. By this alone I cured a Woman, who had been troubled above a year with Wind running up and down her Belly, which put her to as much pain, as if she had had the Colick.

Take of Leaves of Mallow, Horehound, Mercury, Penny-royal each one handful and an half, Roots of white Lily, Marsh-mallow each one Ounce, Flowers of Chamomil, Elder each one Pugil and an half, Zedoary Root half an Ounce, Seeds of Fenugreek, Line each one Ounce, Caraway, Cummin each six Drachms. Make a Decoction in a sufficient quantity of Mallow-Water. To one Pound of the Colature add and dissolve in it, of *Philonium Romanum*, *electuarium de baccis lauri*, Cassia for Clysters each one Ounce, Oyl of Rue, Chamomil each two Ounces. Mix them. Make a Clyster.

In this case also the Stomach and Guts receive great and present relief from Opiates, whereupon they cease from their painful twistings. I have no mind to mention any more Carminatives either internal or external, only I shall give you caution, not to make the Matter worse, but to be careful what you do. Among chirurgical means a large Cup-

Cupping-glass set to the Navil will be proper.

In Heat of the Stomach or *soda*, chalk above all things settle the ebullition, or burnt Harts-horn and Nutmeg are good together in this Disease, and the benefit will be more present, if they be mixt with Conserve or Syrup of Oak-buds, just as they are opening into Leaves, in form of an Electuary. Or Tablets may be made of these and other things.

Take of prepared Chalk one Ounce, Crabs-eyes half an Ounce. Wash them three or four times in Borrage-Water. Add of Bole-Armenick two Scruples and an half, red Coral prepared two Scruples, Pearl prepared one Scruple, Nutmeg half a Scruple, Sugar-Candy eight Ounces, with Rose-Water what is sufficient, make Tablets. The Dose half an Ounce, or for Children one Drachm.

In an extreme case Opiates, but in a little Dose, will be proper, as,

Take of Treacle one Scruple, *laudanum opiatum* one Grain, prepared Chalk two Scruples, white Amber half a Scruple. Make a *Bolus*, with warm Beer.

Spirit of Salt, *Elixir proprietatis* and other Absorbents may be here made use of, inasmuch as they correct, soak up and invert the vitious fermentative Acid in the Stomach and first ways, and thereby drive away and check the foreign Humor, and so stop the *soda*. Also Crabs-eyes and Bole-Armenick, which by a certain precipitation take away the Acrimony from sharp

and acid Liquors, are good in case.

In a lost Appetite, or loathing Meat, either a defect or excess of an Acid may be observed; but the Defect come Squeamishness, want of Appetite, Inconcoction and other weaknesses of Stomach. Wherefore in this case temperate Acids must be given, among which this following excels;

Take of *Elixir proprietatis* *Parisiensis* one Drachm, Spirit of *Sassafras* dulcified, Sal Ammoniac half a Scruple. The Dose three Drops.

Here also Salts of Worm-wood, Cichory, *carduus benedictus*, Centaury and our Stomachick will do good.

If viscosity be also joyned with it, more bitter and aromatick must be joyned with them, as Aloeticks, Absinthacks, the Essence of Worm-wood. Here is receipt;

Take of *Elixir proprietatis* one Drachm, compound *Elixir* of Worm-wood, Mint each half a Drachm. Mix them. The Dose is from ten to fifteen Drops.

Take of acid Spirit of Sal Ammoniac one Drachm, *Elixir* of Mint twenty Drops, Tincture of Amber half a Drachm. Mix them.

If the Scurvy, as often happens, is, be joyned with loss of Appetite, then the following *Elixir* will do good;

Take of Conserve of Scurvy-
grass one Ounce, Orange-Peel,
candied Elecampane, candied
Ginger each half an Ounce, E-
lixir propriatiss one Drachm,
Tincture of Cinnamon, Amber
each half a Drachm. Mix them.
Make a Conserve. Or,

Take of aqua zedoaria anisata, a-
qua anisoforbatica each one
Ounce. Mix them.

And if the Acid be entangled
with viscid and bilious Humors,
then Vomits must be given: for
when the vitious Matter is eje-
cted, the absorbent Acid is set at li-

ber. If you find that the Ferment is
changed and suppressed with
the crude Particles of the Ali-
ment, and thus so the Tone of
the Stomach is hurt, Aromaticks
which have a sweet volatil Sulphur
in them, and spirituous things,
give great relief; but Vomits
must be given first. To this pur-
pose various stomachick Spirits
may be given, especially *Mynsicht's*.
The Dose is a Spoonful. For it is
very good against badness of
digestion, and corruption of Dige-
stion. Malmsley Wine also often
taken by it self has restored the
appetite. *Wedelius* his stomachick
Tincture, which he calls his carmi-
native Essence, is usually mixt with
anodyne Tincture in all these
cases.

Take of Root of Zedoary, Carline
Thistle, Galangal each half an
Ounce, Orange-Peel, Seeds of Anise
Casaway, Flowers of Roman
Chamomil each two Drachms,
Cloves, Bay-berries, true *Acorus*
each one Drachm and an half.

Mix them with Spirit of Citron-
Peel sufficiently sharpened with
Spirit of Nitre. The Dose is
twenty Drops.

But if beside Crudities, this Acid
also offend in quantity and sharp-
ness, then we use to prescribe An-
tacids, various Absorbents, and we
add volatil *alkali's* and other Ab-
sorbents to the former things. Here
also our Tincture of life will be
proper, which follows;

Take of Aloes, Myrrh each one
Drachm, Saffron half a Drachm,
with the volatil Spirit of Sal Am-
moniack draw a Tincture.

We cannot in Words express
the effects we have seen from this
Tincture in this case: the usual Dose
is from ten to fifteen Drops. Mix
Spirit of Sal Ammoniack with vola-
til Spirit of Salt of Tartar, and add
a little Oyl of Mace, you will have
an excellent Remedy to soak up
that Acid. This following also will
do good;

Take of Cream of Tartar half a
Drachm, Vitriol of *Mars*, Crabs-
eyes finely powdered, each one
Scruple, species diarrhodon Abba-
tis, coagulated Spirit of Salt, Salt
of Worm-wood, Cichory each
five Grains. Mix them. Make a
Powder. The Dose is as much as
you can take upon a Knife's
point. Or.

Take of Crabs-eyes prepared, Co-
ral prepared, Ivory prepared
without fire, *Crocus Martis aperiti-
vius*, each half a Scruple. Mix
them.

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If you add some aromattick Oyls to these Powders, you will more concentre the Acid.

In loathing of Meat also Externals must not be neglected, and then divers Balsams, Plasters, Liniments and Cataplasms will be proper; and external aromattick oylly things will be good in this case. Here is a Receipt;

Take of Oyl of Nutmeg by expression half an Ounce, Mastich, Mint each two Drachms, *calamus aromaticus* half a Drachm, Caraway, Cinnamon each ten Drops, Mace five Drops, Balsam of Peru two Drachms, white Wax what it sufficient. Mix them.

This very much strengthens a weak Stomach. Also Crato's stomach Oyl, *tacamahaca*, and *ceratum ex ladano Stokeri* will be proper. This is an excellent mixture;

Take of *spiritus theriacalis*, *stoma-*

chalis cum aqua vite alittle one Ounce. Mix them.

If you like a Plaster, behold *scutum stomachale Hartmanni*, following is in use with us;

Take of choice Mastich one Ounce and an half, *tacamahaca* half an Ounce, resin of *Storax* half an Ounce, Oyl of Nutmeg three Ounces, of Wormseed distilled one Ounce, Balsam of Peru two Drachms, Wax what is sufficient. Make a Plaster.

And our balsamick mixture of Chocolate, Oyl of Nutmeg by expression, Balsam of Peru, Cinnamon and Malmsey-Wine, is good to a weak Stomach, is none of the worst Medicines. But since Remedies may be met with elsewhere, I shall not be prolix in this, but proceed to more necessary finess.

CHAP. II.

Of the Hiccough.

§. I.

NO one Part in the Body has greater sympathy with all the rest, than the Stomach. For it appears by anatomical demonstration, that the Diaphragm is not only near to the Stomach, but has also a common Coat, and the same Nerves inserted into the Mouth of the Stomach, so that of necessity, when the Diaphragm is affected, the Stomach for company is drawn into a troublesome sense. The Hiccough is commonly described to be, a convulsive Motion of the Diaphragm, returning by Fits, depending on the irritation and vellication of the nervous Fibres of the Mouth of the Stomach by a saline Acrimony.

§. 2. *Part affected.*

Most of the Ancients take the Part affected to be the Stomach, both in its upper and lower Part. For they will have it to be primarily affected, and the Diaphragm by consent. And they endeavour to prove by Signs, that these Parts are hurt, to wit, because some Fault in the Meat and what is ta-

ken, precedes, and either Vomiting, Loathing, Pain in the Bowels, Heaviness in the Stomach, or sometimes Distension by Wind, accompany it. Others, treading in their steps (especially *Sylvius l. 1. P. M. c. 23. §. 9.*) give out, that the Diaphragm, or *septum transversum*, is the Part primarily affected, and they prove it, because it is a voluntary Motion; and *Sylvius* and others could raise an Hiccough at any time, whenever they pleased. But we take the Stomach, as to its Fibres and Nerves and Coat, common with the nervous Diaphragm, (and therefore enclined to interpolated Motion) and firmly knit to it, to be the Part primarily affected, for the reasons abovesaid, and especially because we find by daily experience, that this Disease is caused by abundance of Errors in Diet, and a load of ill Humors gathered in the Stomach. And to make the matter more clear, I will give you a case of a certain Man's Daughter, whom I have now under cure.

§. 3. *A Case.*

A Girl of a cholerick Constitution, thirteen years old, has now been afflicted a whole year with a troublesome Hiccough, which takes her four or five times a day, and holds her sometimes half an hour, sometimes an hour. And all the last Winter it afflicted her grievously, but in Summer she was almost free from it, so that it was a long while ere it returned, sometimes but once in three Months; but when Autumn came on, it returned with its former trouble and violence, and continues still. The Parents, being solicitous for their fair Daughter's health, implore our medical assistance. And (blessed be God) I successfully restored her by the Medicines hereafter mentioned.

§. 4. *Diagnostick.*

I thought it worth the while to produce the Signs, whereby we define the imminent or present Condition of the disease. There precedes a loathing of Meat, pain in the Stomach, heaviness, and sometimes Vomiting. As for the essential inherent Signs, they need not be anxiously inquired, since this depraved Motion perceptibly manifests it self at a distance to the Eye and Ear: For it does not only return frequently upon the Patient, but it is sometimes so violent, that all the Body is shaken with the Diaphragm, so that one would think the very Ribs would be broken by the violence of the Motion. In a desperate case Swooning and Convulsions do follow. If it come upon a Fever, as it often does,

then there is great thirst, weak a quick Pulse, want of Sleep, trembling Motion in the under lip, *delirium*, impudence, sometimes slimy Looseness, and many other Signs, which a prudent Physician may easily find out.

§. 5.

The Phenomena being presented and examined, it remains That not only the proximate cause of this Disease be enquired into, but that the remote ones be brought upon the stage also, about which hitherto the Medical Schools have been of different Opinions; in the present, let the principal faults be examined. And we will begin with the remote ones, who make the immediate and proximate cause of this, as they do of a Convulsion, to be irritation and repletion; and they add a third, namely, irritation, and by a sharp Matter, or by bilious and malignant Vapors. And to prove it by this, That in putrid and burning Fevers many pernicious and sharp Vapors rise to the Mouth of the Stomach, yet to the very Diaphragm, and that Men are vexed and afflicted with a grievous, and almost always mortal Hiccough. Bilious, sharp, and viscid Humors, and Wind, so, according to them, may cause this Disease, and so Inflammation of the Liver and other Parts may be apt to cause it. They do not deny, but a Hiccough may be caused by the corruption of Aliment into sharp, and by sharp vapors of Phlegm clinging to the Corners of the Stomach. They prove also That this Disease may come upon inanition, because it often happens

after immoderate Evacuation by Stool, or Vomit, or Sweat, also after a long Flux of the *Menses*, *Lochia*, &c. after a Dysentery, long Coughing, a great Wound, and things of the like nature.

§. 6.

NOW we will proceed to the *Paracelsian* Chymists, who accuse a vicious Tartar, that is exorbitant in the Stomach, and does injury to the Stomach and Diaphragm.

§. 7.

Elmont, that acute observer of Errors in the Ancients, will have the Stomach to be contracted in this Disease, and that indeed by a foreign, salvage Acid, by which hard Guest the Stomach is straitened; for the expulsion whereof the *Archeus* does rise by its motive *Blas*, but its power, being too weak, fails. And so there are convulsed contractions in the Membranes of the Stomach, as often the troublesome cause is occasionally moved, or recurs.

§. 8.

Willis and *Sylvius* in this Disease blame the Animal Spirits, raging tumultuously, and inciting to such a spasmodick Motion. Yet *Sylvius* does not deny, but for the most part an Humour, or some sharp Wind, which by their Acrimony may irritate the Nerves and Fibres of the Stomach, and so of necessity draw the Diaphragm by consent into this convulsive Motion, may cause this Disease. So he has often observed it

caused by corrupt and sharp Food, and by Poysons and Purgations. For all things, which can so affect the upper Orifice of the Stomach, that the Diaphragm may be also affected, are able to produce this Disease; as likewise if the same, being contained in the *Thorax* or *Abdomen*, immediately bite the Diaphragm, or being carried to it by its Vessels, and sticking in its substance, corrode its sensible Parts, or any other way force it to that troublesome and convulsive, solitary contraction of it self, which ever and anon returns.

§. 9.

THE *Cattellians* hold, That the Hiccough has its rise from disproportionate and rough Particles, which vellicate the Diaphragm, and put it into such disorderly Motions. For the Fibres of the Nerves of the sixth Conjugation, implanted in the Stomach and Diaphragm, are here so vellicated, that they by their Motion carried to the Brain do now and then open such Pores in the Brain, by which the Animal Spirits flow violently into the Mouth of the Stomach, that they again contract the Fibres designed for expulsion upwards, so that the Patients at certain times expel the contained Air out of the *oesophagus* with such violence, that one may perceive it make a singultive noise. And when this sharp Humor is discussed by singultive Motion, the Hiccough ceases; and when it is again brought to the *oesophagus* the Hiccough returns.

§. 10.

We think, that the Stomach, by a peculiar artifice, elaborates a certain volatil Salt, and communicates it as necessary and useful to all Parts, and the whole Body: But if this degenerate into acid and tough filth, and that stick fast to the upper Orifice of the Stomach, that then by consent of connexion the Diaphragm is irritated, and convulsively contracted, and that by this convulsive Contraction, a noise is made, and so a Hiccough is caused. And we think, That such a volatil Salt may be charged, if filth brought from other Parts infringe it, as we see in malignant Fevers, Dysenteries, &c. such Filth is sent to this unhappy place, as causes an Hiccough. The Animal Spirits also may here contribute much, when by an amicable motion of irradiation, they ventilate fluids. I am fully perswaded, that an acid and sharp Salt is a cause, when it predominates about the Coat of the Stomach, which is common with the Diaphragm. As is apparent in our case: for the Hiccough troubled the Girl all Winter, because the Acid was encreased by the cold; on the contrary in Summer it gave respite. But when the Autumnal Cold returned, that kept the acid sharp Matter in the Body, the Hiccough returned frequently and violently upon her. Nor will we except Wind condensed about this place, and as it were imprisoned, which by its Acrimony irritates these Fibres, and excites them to this convulsive Motion.

§. 11.

AS to the Prognostick, the disease, because a most grievous Part is affected, is most grievous and oftentimes incurable; and so much the worse, if it come from an inflamed Liver, or after vomiting, the Iliack Passion, or after ing or excessive Bleeding; or it may be accompanied with a malignant Fever or a Dysentery. For *Crates in Coacis* says, *If one has a Hiccough in a violent Fever, or is sick of a very bad Distaste: The Hiccough also coming upon Swelling or a distention of the Nerves, or delirium, is accounted Mortal.* If it accompany Inflammations of the Liver, Womb, Brain, or a great Wound, there is danger, especially if a *delirium* or Coma ensues follow: for then death is not far off. But if it come at the end of the *Crisis*, and the rest of the Signs be good, we need not despair. For I have seen several such a Condition escape. Wherefore what *Vallesius* says, is not to be regarded; namely, That he never saw one, who was wasted by a burning Fever, or sick of a malignant one, taken with a Hiccough and recover. In these cases an Hiccough need not be feared; for oftentimes it goes off without any danger.

§. 12. Dietetick cure.

NOW we will add the cure by Diet, which here is of great moment. The Air for the Faculty must neither be too hot nor too cold. Not excessive, lest the Acrimony be encreased thereby; nor cold, lest it cause

the Acid ; as you may observe in the foregoing case. Let it therefore be pure and temperate, not tainted with strange, fetid Atoms ; but if it be, it must be corrected by Fumes of Mastich, Frankincense, Amber, *Syrax calamita*, Lignaces, &c.

The natural Faculty requires the easiest digestion, without any Acrimony, Saltiness and too much Acidity. Therefore Oat-meal and Barly-grewel, the Broth and Flesh of Chickens, Capons, Hens, but they must not be very fat, and poached and reer Eggs are approved of. But cold, sharp, salt things are hurtful, such as Flesh powdered and smoak dried, and Fish also, all horary Fruits, and all windy things which can fill the Stomach with Crudities. For from these and such like bad Meats are gathered putrid, salt, bilious, sharp, acid and viscid peccant Humors. The Drink may be Beer well defecated, not stale and sowre, with a Toast in it. Wine also is proper, corrected with various stomachicks, and altered with the cordial Tincture, or with Tincture of Daisy, Violets, or Harts-horn.

The Animal Faculty requires moderate Motion, lest the Disease be prolonged, and that one ly quiet in a warm Bed ; for too much Motion promotes an exagitation of the heterogeneous Particles, and thereby drives an Acid lying in the Blood, or any where else, to the Part affected ; and so the Disease may easily be produced. One must do all he can, to sleep : for want of it disturbs the Spirits and Humors.

The Passions of the Mind must keep within bounds. When Men are disturbed with anger, or struck

with grief, the Disease grows worse. For it is known to every one, how anger draws the Nerves, disturbs the Humors, and stirs up the rage of the Bile. So grief likewise may do harm, as it puts the Spirits to flight, and so may give occasion to this Disease.

As to the *excreta* and *retenta*, they must be conformable to the Laws of Nature, either by Art or Nature.

§. 13. Pharmaceutick Cure.

IT is now requisite, That we briefly add the Pharmaceutick and Chirurgical Cure. And first of all the old *Galenists* endeavor to make the peccant Matter (that is, if the Disease come from repletion) whether it be cold or hot, obedient to Nature by Preparers. If the Hiccough come from a viscid and pituitous Humor, then they use *Syrupus de duabus radicibus, de stœchade*, Oxymel of Squills, a Decoction of *Asarum* root, Galangal, Elecampane, Horehound, Cummin Seed, &c. But if it come from a hot sharp Matter, then they prescribe Syrup of Roses, Vinegar, of Juice of Endive, Barly-water and other temperate Coolers. Then they endeavor to evacuate all peccant Humors from the Body by some convenient Purge. They give a Vomit with Warm-water, adding a little Syrup of Endive or simple Oxymel, or they give half a Drachm of *Asarum* root, or they purge downwards with *diaphenicum, hiera picra*, aromatick Stomach-Pills ; and they add a little Castor in a cold Cause, and in a hot one they commend Rhubarb, Manna and Cassia. Then they hin-

der the flux of Humors to the Stomach by Avertents ; such as Ligatures, hard Rubbings, Cupping-glasses with much flame set to the Back, Shoulders, Navil, and afterwards to the Pit of the Stomach, especially if Wind be in fault. Cold Water may be thrown in the Patient's face, to fright him, which often makes a Man hold his Breath, and so by consequent the Hiccough is observed to go away. He may rub his Ear with his little Finger. The extreme Parts of the Body may be washed in a hot Bath. *Myrepsus* commends *antidotus è croco Esdra*. If the Hiccough proceed from inanition or acrimony, they give divers fat Broths, Barley-water, Milk of Goats, Asses, Cows, and such like moistning Food; Cock-broth, Oyl of sweet Almonds, Mucilage of Seed of Fleawort, and other things, which according to them are good to correct Acrimony. They do not despise Syrup of Violets, white Poppy, Water-Lily, and *philonium Romanum*. A Bath also of fresh Water is good. Among externals they apply divers Plasters both to the Stomach and Liver, To the Liver they apply *emplastrum santalinum*, to the Stomach *emplastrum de crusta panis*, and *tacamahaca*, and they advise the applying other hot and temperate Oyls, Violer, Massich, &c. to the Stomach and *Spina dorsi*; but you may your self gather more out of Authors.

§. 14.

NOW we will search the Chymical Boxes. The Chymists in this Disease highly commend volatril Acids, those excellent Medicines, which were not formerly

known. These in the mean time will be proper, *mixture fructus Citrura bezoardica Michallii*, Salt about four Drops given in *qua vita*, or Tincture of Gold, or Precipitants, Harsh Crabs-eyes, and many other like Medicines, which we shall mention after mention.

§. 15.

Helmont commends divers rituous and volatril things, good to rouse the lazy Stomach for he will have this Disease cured by *Arcana*, and he commends his *arcanum selenum*. His Scholar *Grembs* commends his Waters.

§. 16.

Allis does no where expressly treat of this Disease; yet since he takes in for convulsive Motion, all things in his Opinion are good for convulsive Motions, will also be good here.

§. 17.

Sylvius, whenever bad Food or Medicines or Poisons are contained in the Stomach, does first temper them, and then cast them off by antimonial Purgatives. For tempering, he prefers Nourishments before all others, inasmuch as they do not only temper any bad Humors, but moreover dull the Sense of the Stomach, and reduce the impetuous Animal Spirit to a more moderate manner of Motion. But in evacuating the Humor by Vomits, after he has used Narcoticks, he advises *spemtimonii*, or *tartarum emeticum*.

mony so prepared, that it will purge the peccant Matter by the vomit, yet he will have these Catharticks given but in a small quantity, because these Antimonialls, if they do remain in the Body, do no harm, as the vulgar think; but (which is more) they do good, by amending the noxious Humors in the Body, or by further preparing them for a following Purge, as he has tried a thousand times. If the Patient be not inclined to Vomiting, nor nauseous, it is better to evacuate the peccant Humors downwards, by Phlegmagogues, Cholagogues or Hydragogues, or by a mixture of them, according to the vicious mixture of the Humors. And when viscid and thin Humors are peccant, he magnifies the Pills of Gum, which I have communicated already. The Patient may take three or four of them when he goes to bed. And in this case the Apozem described, l. 1, cap. 2. p. 35. will do good.

But if Vomits and Purges be vomited up again as soon as they are taken, and the Patient be tired, an aromatick mixture will be proper, as well to dissipate the troublesome humors about the Stomach, as to stop the Hiccough. For instance;

Take of Mint Water two Ounces, *aqua vita Matthioli* or *theriacalis simplex* half an Ounce, *confectio Alhermes* one Drachm, *laudanum opiatum* two Grains, Syrup of Mint one Ounce. Mix them. Let the Patient take a Spoonful or two of this Liquor, and compose himself to sleep.

And when the Hiccough is a symptom of some other grievous

Disease, of a Fever, namely, or Inflammation, &c. it ceases of it self, when that is cured; yet it may do no harm in the mean time to mix Opiates with Diaphoreticks and acid volatil Alexipharmacks: for so you will kill two birds with one stone.

§. 18.

THe Cartesians for filing and turning those pointed and rough Particles, that vellicate the Diaphragm, commend all hard and ponderous things, such as Crabs-eyes, Coral, Filings of Steel, Gold, *Mercurius dulcis*, yea and Opiates. Nor do they neglect giving of Purges, as there shall be occasion.

§. 19.

Now it is our turn to propose our own Method of Cure. From whatsoever cause therefore an Hiccough comes, if it continue perniciously, we give a Vomit to evacuate the sharp, acid Humors, if the Patients strength will bear it, of *Oxyssaccharum emeticum Angli Sale* (in whose Desks there still ly hid many sacred Medicines) or *tartarum emeticum Ludovici*, or seven and twenty Grains of the Powder of *asarum* root. But if Squeamishness and other Signs of Vomiting be wanting, we betake our selves to gentle Purges: for we would forbear violent Purges, especially if the Motion be plainly convulsive, by reason of the great tumult which they cause in the Spirits and Humors, because they rather encrease than diminish the Disease. Yet gentle Purges may be given in divers forms, for Instance, Rhubarb,

cor-

corrected *Senna*, Raisins and Mechacacan, an Infusion whereof is said to have given *Ferdinand* present relief in a pertinacious Hiccough of twenty Days. The following Pills are good;

Take of *massa pilularum marocostinarum* one Scruple, *extractum thriacale* four Grains, Essence of Castor one drop. Mix them. Make Pills for two times. Roul them in prepared Harts-horn. They both correct and purge. Or,

Take of *Scorzonera* root half an Ounce, yellow Rhubarb one Drachm and an half, Leaves of Oriental *Senna* two Drachms, Cummin-seeds, Cinnamon, Zedoary each one Scruple, Currans one Ounce, the four Cordial Flowers each two Pugils, Cream of Tartar two Drachms. Boil them in a sufficient quantity of Spring-Water, and make an Apozem for two times.

To such as are weak, we would recommend sweetning Clysters instead of Purgers. For instance;

Take of the carminative and emollient Decoction one Pound; add of *electuarium benedictum laxativum*, Oyl of Rue each one Ounce, Sal Ammoniac one Drachm, the Yelk of an Egg. Mix them. Make a Clyster.

Absorbents follow Purgatives, which are able alone in a manner to cure this Disease, by soaking up those sharp acid Humors that stick and cling to the Stomach and Fibres of the Diaphragm, and solicit them to an elastick Motion. But

here Appropriates or Specials must be chosen: for the Acid in an Hiccough differs from another acid, yea the various these Acids can scarce be determined, for all Practice in this depends upon this business, and experience also is required, to cause a special Antacid is required to sweeten a special Acid. It is the difficulty, In the hypochondriack Disease there is one Acid in the Heart-burn another, and a *Gonorrhœa* another, every one of which therefore has its special Medicines. Therefore to find the Acid, that is specifically present in the Hiccough, *Joel* commends burnt Harts-horn given in Wine, which is a Remedy approved by us; it would be excellent, if prepared Cordial, and a drop or two of Oyl of Cinnamon Cloves or Aniseeds were added. Here follows an excellent Powder;

Take of native Cinnabar or *Mercurius dulcis* one Scruple, red Coral, Harts-horn prepared without fire each fifteen Grains, prepared Pearl ten Grains, *theriacale Hanovianis* twelve Grains. Oyl of Castor, Cloves each drops. Mix them. Make a til Powder. The Dose each ple.

This Powder never failed upon in Cinnamon and Quince Mint-Water. For it tempers acid and sharp things, and engages all membranous and fibrous Parts, when corroded and vellicated by sharp Juices. The virtue of Opiates can never be sufficiently commended; for they only procure Sleep and ease

they also correct an Acid, and make all things quiet; which if they be joyned with appropriate precipitators, the business will succeed the better, as *wedelius* has observed in *opiolog.* l. 2. f. 2. c. 4. m. 166. who mixt them with Castor in a Liquid or solid form, and gave them with great success in any Hiccough, but especially in convulsive one, and never failed at his end. So we not long since found the effect of Opiates in a Hiccough joyned with an Epilepsy; for they check the violence of the Spirits, and make them slower, which their well known effects, Somnolence and Indolence, do testify. For the Animal Spirits in the economy of the Body are not only the prime Authors of all local Motion, but of life also. For they are the highest Wheel, which turns all the other Wheels in the Body (like an artificial Clock-work) as the Lord *Verulam* does ingeniously discourse. As long therefore as that elastick violence of the Spirits lasts upon the Diaphragm, as we said before in §. Of the Cause, so long the Hiccough will not cease: But when the motive violence of those Spirits is a little stoppt, and their rational Influx a little hindered, the Tone of the Fibres will cease, the easy reception of Sensibles will at the same time abate, and the motive straining of the Fibres of the Diaphragm will languish, and so all will grow sedate. And all this you may obtain by *Opium*, for it is a stout conqueror of the Spirits. Here are Receipts;

Take of extract of Castor, Zedoary each four Grains, *laudanum opium* two Grains and an half.

Mix them. Make six Pills for two Doses. Or,

Take of Essence of Castor, Treacle each one Scruple, *tinctura anodyna Widellii*, or *cum spir. tartarifat.* half a Drachm. Mix them. Give twenty Drops or more for a Dose.

If a malignant Fever, Dysentery, or Small-Pox, &c. accompany the Hiccough, then Alexipharmacks must be mixt with Antispasmodicks and Opiates. For example;

Take of *pulvis Pannonicus ruber*, *bezoarticus Sennerti* each one Scruple, *specificum cephalicum* half a Scruple, Bezoar-stone, *theriaca caelestis* each four Grains. Mix them. Make a Powder. Take as much as will ly on a Knife's-point in the following or some such like Vehicle;

Take of Water of Borrage, Bugloss, *aqua antispasmodica nostra* each one Ounce, Cinnamon one Ounce and an half, Syrup of Betony six Drachms. Mix them.

In a windy Hiccough *Hoffman in clavi Schroderiana* commends this following;

Take of Water of Dill, Cummin each half an Ounce, Oyl of Aniseed, Caraway, Cummin each three Drops. Mix them. The Dose is a Spoonful or two Morning and Evening.

In this case let the Patient chew Aniseeds continually. Here also all volatil oily Salts will be proper. This is the internal Cure.

External

External topical Remedies also deserve great praise in this Disease. I can affirm it upon experience. The best of them are a Cataplasim of Treacle, of Leven, and that of *Mynsicht* against the Hicough applied hot to the Stomach between two linen Cloths. *Timeus à Guldenklee* promises the same from a Cataplasim of Oak ashes wet with Malmsey Wine. Or this following one of *Michael*;

Take fowre Leven two Ounces and an half, Powder of Mint leaves one Ounce, Zedoary half an Ounce, Seeds of Cummin, Caraway, Anise each two Drachms, Vinegar of Roses what is sufficient. Make a Cataplasim.

Or the following Plaster, approved by my experience;

Take of *Emplastrum de baccis Lauri*, *Stomachalis Cratonis* each one Ounce, Chocolate of *Sevil* half an Ounce, Oyl of Castor half a Scruple. Mix them. Make a Plaster.

Or our balsamick mixture, especially in Children, will not fail you. Or a Crust of Bread besprinkled with *aqua Anhaltina*, which has often done good, applied hot to the Stomach. Or Swallows cut open alive and applied hot to the Stomach, stop the Hicough, as it is a convulsive Motion of the Diaphragm. *Rodrigus à Fonseca* tom. 2. consult. 27. magnifies a Fomentation of sharp Vinegar, Castor and Mustard applied hot with a Sponge to the Stomach. These may serve for Bigs;

Take of Flowers of Chamomile, Calamint, Rosemary each a Handful, Tops of Mint, Steeplewood, Horehound each a Handful, Citron Peel, Mace, Langal each two Drachms, of Cummin, Caraway, each half an Ounce, Cloves a Drachm. After they are washed and grossly bruised, quench them in a Bag, and besprinkle them with *oleum carminativum* *Morri*, or Oyl of Mint, what is sufficient.

For Poor People;

Take Leaves of Wormwood, Mint, Juniper-berries each a Handful, Mace, Anised, Caraway, Nutmeg each a Drachm. Besprinkle them with Wine and Vinegar, and apply them to the Stomach.

These things we had from the pharmaceutick Fountain; now follows the chirurgical, whence we may take several generous Remedies in this Disease. Thus the advice of *Fonseca*, *Zacutus Astruc* and several experienced Authors, we may apply a Cupping-Glass with much flame to the Stomach. And we do not condemn Ligatures and Frictions of the extreme Parts, for relief on sake. And according to *Galienus* his counsel, we wash the Body, to keep the Diaphragm from contracting it self with that violence. See *Willis de Pleurica passione*, so likewise the Hicough may be stopped by holding ones Breath, which *Sylvius*, we make no scruple to advise. And if a Man be plethoric, and there be an Inflammation

of any Part, we would advise
ing, for to cool the Heat of
Blood, and to retard the Ani-
Spirits. In a gentle Hiccough,
only holding ones Breath, but
ing often does good. And I

know a Man, who cures the Hic-
cough by whispering, I know not
what, in the Patient's ear. The
reason of this perhaps is, because
the thoughts of the hiccoughing
Person are diverted another way.

CHAP.

C H A P. III.

Of a Loosness, called Diarrhœa, Lienteria and Cœliaca

§. 1.

Good Ingestion, Digestion and Egestion may well be termed perfect Health. For it is well known, how necessary it is for a Man to refresh his Body every day with Meat and Drink; and it is as necessary to discharge the Excrements every day, that are gathered from them: And hence it is, That provident Nature has contrived and made several Canals and Sinks, to carry off the Excrements of the Body. If any one or more of them be hurt, or if these Emunctories be too much sollicitd, there arise divers fluxes of the Belly, of which we shall give you first of all three kinds: A *diarrhœa*, from *ῥέω* to run or flow, and it is a frequent and plentiful going to stool, whereby various and liquid Excrements are voided. A *Lienteria*, which is as much as to say, a Smoothness of the Guts, which is described to be, a Loosness, in which Meat is voided whole, and looks as when the Patient swallowed it. And the *Cœliaca Passio*, is, a voiding of Food, that is fermented indeed, but it is only confusedly. Now because these three Diseases differ but

very little among themselves, I have put a mind to treat of them all together, lest we should tire ourselves with repetitions.

Now we will describe a *diarrhœa* our own way; and we will treat of it to be a voiding of divers, but thin and liquid Humors, arising from a modick irritation of the Fibres of the Guts, and a coarctation of the small Glands lately found in the Guts (out of whose Plexus, as it were, out of a Spring, the Humors arise). And so we think a *Lienteria* and a *Cœliaca Passio* are Diseases of the Stomach, and more particularly of the orbicular Fibres, which are found in its second Coat.

§. 2. *Part affected.*

Authors do make the Subjects of these Diseases very various, some will have it to be in the Guts only, others the Stomach, and some, both the Stomach and Guts, so that you cannot well determine with which Party to side. We will take the Subject to be the Fibres of the Stomach, and the Glandules of the Guts, which are usually irritated and spasmodically contracted. For the contraction of

active Fibres is attended with a manifold Motion of the contained fluids; that is, whenever any Part at the sense of something troublesome and noxious, affected with a disorderd and impetuous vibration of the sensible Fibres, the violence of the Spirits is moved at it, by which the hurt of the Fibres is increased, and their spasmodick Motion is more or less performed. And when these Fibres and Glandules are contracted, the lymphatick, chyliferous Vessels, and all the Passages and Emunctories of the Part are straitned more or less, and thereupon either the Passage of the Contents being stopt a while, there is a stagnation about the Part affected, whence comes a Tumor: Or there is a very plentiful Effusion of these Contents by ways usual or unusual, yet open or not difficult to be opened, according to circumstances, which causes these disturbances.

§. 3. Diagnostick.

These three Diseases have no great need of enumeration of many Signs, since they are such as manifest themselves to the by-standers as well as the Physician: but since they differ among themselves, we shall add a few things for distinction sake. In general there are Belchings, Wind, Restlessness, swelling up of the Belly, Rumbling in the Hypochondria, Pain in the Side, loathing of Meat, Thirst, Rises in the Stomach, Gripes, and last comes frequent going to stool. In a Diarrhœa the Excrements are bilious, i. e. yellow; or black, that is, acid, or pituitous, or viscid, or stercorous and fetid, or greenish-coloured, or white like Chyle,

or chalky (as I observed in a Shoemaker not long since) or fat and like tallow (as is usual in consumptive Persons) or gravelly (as I observed in an old Man, who together with Gravel voided a Stone of an Ounce weight.) A Lienteria is known by the like constant Excretion, differing nothing from the consistency, colour and smell of what is taken, so that the Meat looks just as when it was eaten. Yet it must not presently be taken for a Lientery, after a Man has eaten Lentils, or any hard Meats, that are difficult of Concoction, if he void them whole by Stool, but when there are the Signs above-said, and sharp and bilious Stools do also appear. In a Cœliaca the Excrements usually come white like Chyle, Nutrition is diminished, and there are Belchings and Distensions of the Belly. Now we will proceed to the Causes.

§. 4. Cause.

THE old Galenists reckoned the immediate Cause of these Diseases, to be the expulsive Faculty stimulated and irritated by the four Humors; nor do they excuse Wind: for they prove, That Vapors and Wind offend through weakness of Heat, by the rumbling and fluctuation of the Guts. So Hippocrates, l. 2. de Diata, cap. 19. testifies, That corrupt Chyle heats and disturbs the Body; wherefore Paulus Aegineta calls a Diarrhœa a corruption of the Food. Sometimes in loosenesses Men void bilious Matter, sometimes melancholick, sometimes phlegmatick, sometimes crude and sometimes concocted: And therefore they blame the intemperature of the Stomach.

§. 5.

THE Chymists, according to their Principles, accuse a dissolved Salt, which by its Acrimony stimulates and irritates the Stomach and Guts, and their Fibres and Glands, to which it sticks, from whence they do not question but Loosenesses have their original.

§. 6.

Helmont will have the rage of the *Pylorus* to be the only cause of a Looseness; because the *Pylorus* is the ruler of the whole œconomy of the Stomach, unto the *intestinum rectum*. In general he blames the fault of the Digestion; in particular he accuses a per-
vicacious Acidity of the Ferment, the dissent of the *Pylorus* and Ferment of the Gall, and the exorbitance hereof, an acid corrupt Chyle, and any mucous stuff that sticks to the Guts. From whence he derives various Fluxes of the Belly.

§. 7.

Millis affirms, That any sharp, serous and bilious Humors, when they suffer a *fluor* in the Mass of Blood, are carried towards the Stomach and Guts by the Celiac Vessels, and while they abound there, may cause various and horrible Fluxes of the Belly.

§. 8.

According to the *Sylvian hypothesis*, a *Diarrhœa* usually arises from a vicious Effervescence of

the Juices in the Guts, by reason of a sharp and saline Bile, that stimulates the Guts. In a *Celiac Flux* they think the Motion of Chyle is preternaturally violent, in which Chyle together with Excrements is voided by Stools, wherefore he would have it called a chylous Looseness. And he ascribes the cause of this Disease to an Obstruction of the lacteal Veins, and of the rough crusty Coagulum, wherefore in the Cure, he advises the opening of these Veins.

§. 9.

The Cartesians think, That a great store of Humors is precipitated out of the Blood by the Vessels, that open into the Guts, whereupon the Fibres of the Intestines are vellicated and irritated, so that the Animal Spirit has not greater plenty, and so excites a peristaltick Motion, and causes a Convulsion. And they think the cause of this separation and precipitation to be the Effervescence of the Blood, augmented by the bilious Particles, that were present in the Blood and Serum, which irritate the Fibres by their acrimony. But in a *Celiac* and *enteria* they blame a bad Ferment of the Stomach; because the Chyle is not sufficiently dissolved by it.

§. 10.

AS to our own Opinion, well known to every Body, That the Stomach and Guts are strangely griped in these Loosenesses. In a *Diarrhœa* the enemy galled with various Darts, and they touch the Fibres, they are of necessity be contracted, and

to the nature a motive Fibre ; whereupon also the Emunctories of glandulous Texture, that open in the Guts, are straitned and pressed; by which constriction Liquors are squeezed, as out of a sponge, and so are voided by stool. But in this business of concoction the Fibres of the intestines, Glands, and of other ways and passages, are only as instruments, the Animal Spirits acting violently and performing that office, as the principal Agent ; whereupon, when violence is offered to these passages and Emunctories, then such constipation and straitning follows: wherefore this Disease may well be called a convulsive Disease of the Guts. And this private enemy is any bad, sharp, acid Humor, gathered in the first Region of the Body, poured either out of the Arteries or lymphatick Vessels, either critically, or for the most part symptomatically, so affecting the Fibres of the Guts by its Acrimony, that by the constriction of the nervous Fibres, through the help of the Animal Spirits, the humors are forced to pass downwards.

A Looseness therefore may arise either from too great serosity or universal Acrimony of the Blood ; therefore scorbutick People are then subject to it ; or from the stoppage of the transcolation of the Chyle through the spongy and glandulous Crust into the lacteal veins, as in the Coeliack Passion, when something of Chyle is voided together with the Excrements, or a serous Matter is thrown off the serous pancreatick Juice, which ought to be ascribed to the serous excrements of the Blood. For it then happens, That the Serum in

the Mass of Blood, which should be dissipated in form of a Vapor, when the Pores and Passages of the Skin are closed, does restagnate, whereby the Serum encreases, and often causes a Looseness. Wherefore in my Practice I commend Sweating for a Looseness. It often happens also, That Bile pricks the Fibres of the Guts, and the corrosive *Alkali* of the Gall is so fretting, That it corrodes the very Guts, and causes a Gangrene, and then it spoils the Animal Spirits residing in the Fibres of the Guts, and then death follows. So the Guts are solicited by a vitious and corrosive Acid, whereby divers Fluxes of the Belly are caused, in which case the Excrements appear black ; and this Acid by corrugating the sensible Fibres often causes horrible Gripes. These Loosenesses vary according to the various nature of the Acid. Nor do we deny, but in a Lientery and Coeliack Passion the Ferment of the Stomach may be vitiated, and rendered unable to dissolve the Food ; wherefore of necessity it must be voided crude ; and this Disease may easily arise from a weak or abolished influx of Animal Spirits.

§. II. Prognostick.

THe divine Hippocrates in the *prognum* of his Prognosticks inculcates, That the Prognostick is of necessity to be known by a Physician : wherefore we will see what we may rely on in these Diseases before us. They are troubled with long Loosenesses, according to Hippocrates, *aph. 30. sect. 3.* who have just passed the Years of their Youth, and they that are near old Age.

A *diarrhœa* is the easiest sort of Looseness to cure; but it is apt to turn to the other. *Helmont* says, a *diarrhœa* is mortal, which comes through the fault of the natural œconomy, that is, from the activity of the Ferments being abolished; wherefore it is ever fatal to heftick People. But that which comes from the poysonous *Blas*, may be cured by the help, of a Purge. A symptomatical Looseness is worse than a critical. That is good which comes to a Woman with Child towards the latter end of her time, and facilitates her Child-bearing. Also that which follows the stoppage of the *lochia* and breeding of Teeth; that which comes in the Spring-time and in ferous Bodies. But that is bad, which follows a Pleurisy. In malignant Fevers a Looseness accompanied with other bad Signs is often Mortal, as among others I observed in the Illustrious Count *Joazel*, the Emperor's Comissary General, who lay sick at *Limburgh* eight days of a malignant Fever, and a bilious *diarrhœa* coming, the third day after he died, in whose Body, when I opened him to embalm him, I could find nothing to lay his death to, unless it were, that his Gall-bladder had not so much as one drop of Bile found in it. A *diarrhœa* of it self menaces no danger. For, according to *Celsus*, l. 4. c. 19. it is wholesome to be loose one day, if there be a Fever, and if it go off in seven days. Therefore it should not frighten a Physician, if such things be evacuated as should, and the Patient bear it well: when the Humors come by little and little, and without disturbance. A looseness also is good, when it follows an In-

flammation of the Eyes, according to *Hippocrates*, l. 6. aph. 12. a Palpitation of the Heart, page of the *Lochia*, Dropsy, Deafness, 4. aph. 28. Excrements that are very white, frothy, frothing, fretting, crude, large in quantity, viscous, watry, purulent, Meal or Chaff, eruginous, especially black, are bad; but they are good in splenetick People, and after using of steel Medicines. If a Woman with Child have a Looseness she is in danger of miscarriage, *Hippocrates* says, 5. aph. 34. this must be understood with other bad Signs, and especially the following. For I know a case, where Physicians gave a fair Maid, who kept her being with Child, to them, strong Purgatives, yet found no harm by it, but was brought to bed of a lusty Girl, which she strangled, and was headed for the Fact. If a Looseness come from over-eating of self, there is small danger, but dangerous, if it be caused by bad and poysonous Meats. Dropsy Persons, when they are taken with a violent Looseness, though sometimes they escape, yet they die. People recover of a diarrhea when their Excrements grow better, that is, when they thicken, grow nearer their natural color. But when the alteration is for the worse, and the Excrements are green, ash-coloured, black, frothy, stinking, with hiccouging and other bad Signs, this is a dangerous change, and usually ends in death.

12. Dietetick Cure.

The Air must be temperate: for a moist and cold Air produces a Looseness. If one sit on a cold Stone, or walk bare-foot on cold and moist Floor, he is apt to fall into a Looseness. In Autumn and Winter Loosenesses are frequent, because transpiration by the Pores and Passages of the Skin is hindered. For in Summer-time these Passages are open, and the Body is continually in a Sweat with a perpetual translocation of the Serum, and upon the Passage of this serous Vehicle by the Skin, little Urine is made, and the Belly is bound; but when all things are frozen with Winter's cold, and these Passages are stop'd, Urine is more plentiful, and the Belly is looser, which the famous Practitioner Gabelchoferus cent. 73. confirms, where he says, *they that are of a thick texture, and have a thick Skin and narrow Pores, excrete more to Stool, than they that have open Pores, by which Vapors and Humors may be spent, the Excrements are dried, and the Body is constricted.* Hence it may easily be gathered why Fluxes are often raging in the latter end of Summer and beginning of Autumn. Hence also coloricks are commended in Loosenesses, to make a diversifi-

The Meat must be of a laudable taste, and taken in a small quantity; not fluid; roast-meat, and boiled with Spices excel. All beating or chopping up of any Meat without chewing it, or mixing it with Spice, is bad. All crude, acid Meats, and horary Fruits are in the same predicament, especially Cabbage. Therefore they take

but a bad course for their healths who take this Cabbage for a purging Medicine, when it rather does it because of its ill Digestion. In this case divers Mushromes are bad; which have sharp Particles in them; and Seneca does rightly call them a *pleasant Poyson*. Melons and Cucumbers are of the same rank, especially eaten raw, seasoned with Pepper, Salt, Oyl and Vinegar, and eaten with other Meats, upon eating of which I have observed abundance of *diarrhæa's*, Lienteries, Bloody-fluxes and enormous Vomiting. So that a French Physician might well write on the front of a stately House which he had built, this French Distich in Letters of gold.

*Les concombres & les melons
M'ont fait bastir cette maison.*

And here all Pulse, which contains in it an occult Acid, is condemned; and also all Meat that is salted and smoak-dried, Swines-flesh, all fat and sweet things, which have a corrosive Acid in them, by which the Fibres of the Guts may easily be irritated, and so spasmodically affected. All Purgatives that are either poysonous, or given in too large a Dose are as bad, which often produce an over-purging and an incurable Looseness. For there are some, That have most tender Fibres in the Mouth of the Stomach, and (pardon the Expression) a paper Stomach, which, if it also abound with sharp Humors, is easily put into a Looseness. So I gave a Girl only two Ounces of Manna with half an Ounce of Cream of Tartar, and one would wonder what disturbance it gave her, and how it over-purged her. I also

knew one, extremely hypochondriack, who took only as many Frankford Pills as he expected Stools: for he had a moist Serum without any driness, sharpened with a saline stimulus. On the contrary, they that have dry Guts without Serum, and have strong and hard Fibres, are not easily moved; especially where the Acid is strong, by which the strength of the Purge is weakned. For the virtue of Purgatives depends upon a greater or less quantity of Serum in the Body, that is more or less acid, besides the disposition of the Stomach: Therefore a lax and moist Stomach and Guts are difficultly irritated: but they that are full of excrementitious, serous, sharp, saline Humors are easily wrought upon. Be wary therefore, and have a care of Poysons, which by their arsenical sharp Particles, mixt with a sweet viscosity, are not only able to disturb the Mass of Blood, but spasmodically to irritate the nervous Fibres of the Stomach and Guts, so that often, yea of necessity, a violent flux of the Belly must follow.

Let Drink in Loosenesses be moderate. Wine of Pomegranates or Quinces, or Malinssey, or Juniper mixt with other things is said to do good specifically. Large drinking does hurt. Poor People may drink Beer well boyled and wrought, in which a piece of Steel or Gold has been quenched. But a Decoction would do more good made of Harts-horn, scorzonera Root, Tormentil, dried Quinces, Hips and other moderate Astringents. On the contrary one must have a care of hot Wine and new, of which *Schola Salernitana* says well,

*Impedit urinam multum, fit
to ventrem, &c.*

Motion and Rest must be moderate; unseasonable exercise, as Dancing, Riding, Running, much playing at Ball, are the cause this Tragedy. So likewise Looseness must of necessity be a life too sedentary, while it hinders transpiration, and fills the Body with many serous Humors remain behind.

Sleep and Watching must exceed mediocrity. But Sleep must be procured, as much as may for it checks all Evacuations of Sweat.

The excreta and retenta must correspond to Nature. For usual Evacuations, such as Urine, Sweat, (which uses to evacuate Serum either sensibly or insensibly by the Pores of the Skin) Stool, Urine, the flux of the Humors, or menses, suppressed or removed too violently, may do great mischief.

The Passions of the Mind must be moderate. So in anger, by violent commotion of Blood, these dregs, that taint the Blood, are usually thrown off the Body into the *ductus sileus* and *pancreaticus* (I have often observed violent diarrhœas. So *Platinius* observed a Looseness upon Grief (as much as the Humors are removed in the Body.) which observed Loosenesses follow hope and fear. Our Lives therefore must be regulated by the golden Mean.

§. 13. Pharmaceutick Cure.

Now we will subjoyn the Pharmaceutick cure according to the Minds of the Ancient Galens. They first of all corrected the Humors with Preparers, Syrup of Mint, Water of the same, Plantain, Zedoary, &c. Then they evacuate the corrected Humors. In hot or bilious Constitution they give Goat's Milk, Rhubarb, Tamarinds, Syrup of Cichory with Rhubarb, &c. In a cold or melancholick Constitution they give gentle Melanagogues, in a phlegmatick Constitution Phlegmagogues. Then they fly to corroborants, as to their last refuge. To this Class they refer all Astringents, such as Tormentill, Bistort, Plantain, Purslain, Seeds of Dock, Myrtle, Quinces, Pomegranates, Medlars, Currans, Services, Cowre Plums, Coral, Bole Armeick, terra sigillata, Dragon's blood, precious Stones, burnt Ivory, Marmelade of Quinces. In a phlegmatick Looseness they commend Aromatics, which incide and strengthen; such as Mint, cardus benedictus, Peels of Orange, Citron, Zedoary, Cinnamon, Nutmeg, Lignaloës, Amber, Mastich, Mare's-runnet. Of these they make thousand Reciepts and Comounds. At last, when necessity forces them to it, they fly to Anodynes; among which they commend Venice Treacle, Philonium Romanum, requies Nicolai, diascordium, &c. Among chirurgical means they forbear Blood-letting; they allow of Cupping and Scarifying the Shoulders and Back, because thereby they evacuate, deplete and make revulsion. Avicenna

says, l. 3. fen. 16 tr. 1. cap. 1. that a large Cupping-glass applied to the Belly does very much good in this case. So they do not contemn Vesicatories, Frictions and Ligatures. Of which see Sennertus, who may serve for all.

§. 14.

The Chymists, for correcting these dissolved Salts, do commend several fixt Precipitants, and Infringents with astringtion, such as *crocus Martis astringens*, Vitriol of Mars, Tincture of Mars, Coral, Sulphur, Vitriol, styptick Liquor, *saccharum Saturni*, several Martial, and aluminous Medicines, and a thousand other things.

§. 15.

Helmont in a *diarrhœa* that proceeded from the fury of the *Pylorus*, gave two hard Yolks of Eggs mixt with Vinegar of Roses. According to him Horses hoofs fried in Butter mitigate this disposition of the *Pylorus*. Also Iron-Waters are highly commended by him.

§. 16.

Allis among other things commends, universals premised, this following;

Take of Rhubarb powdered two Drachms, Salt of Tartar six Grains, Cichory-water five Ounces; let them stand a Night in digestion in a warm place. Give it.

Then he gives a Drachm of Venice Treacle, drinking two Ounces of the following Iulep upon it;

Take of Water of Mint, Cinnamon, Barly each three Ounces, Treacle half an Ounce, prepared Pearl half a Drachm, *saccharum crystallinum* half an Ounce. Mix them. Make a Julep.

At the same time the Author aforesaid toasts a slice of Bread, spreads it with Treacle, dips it in some generous red Wine heated, and applies it hot to the Stomach; and ever and anon he changes it. He does not neglect divers Styptricks, prescribed here and there, and, if the Pulse and Respiration be strong, he flies to Opiates; among which he indubitably believes that *laudanum liquidum cydoniatum*, about twenty drops of it given in a draught of the foresaid, or some other Julep.

§. 17.

Solibus In a bilious *diarrhoea* commends all things that correct the saline Acrimony of the Bile; and this he does by diluting, and acid or gently astringent Medicines, such as Quinces, Barberries not ripe, Verjuice, Plantain, Perslain, fat Earths and *terra sigillata*. But if the Flux be serous, then he orders Hydragogues; for instance, Powder of Jalap; he gives Sudorificks and Diureticks, among which he magnifies a Decoction of Root of China, *sarsaparilla*, Butterbur, *ignum Guajacum*, Oak, Box, &c. And he commends roasted Rhubarb and Nymeg in a *diarrhoea*, be the cause what it will. After he has corrected and evacuated the Bile, he goes to tempering things, for which end he prescribes *diascordium*, Treacle, *confectio hyacinthi*. He commends the following Receipt,

Take of *diascordium* one Drachm and an half, *confectio hyacinthi* one Drachm, Syrup of Marshmallows one Ounce, Cinnamon-water one Ounce, Plantain one Ounce and an half. Make a mixture to be given by Spoonfuls.

In a Coeliack Flux, when the Stomach is voided with Excrement by Stool (which it often is upon the obstruction and then breaking of lacteal Vessels) he uses Catharticks, that are a little astringent. But if the lacteal Ducts be obstructed by viscid Phlegm, and the Chyle finds no passage, in such case deobstruent Medicines are good, to clear the carious from Viscidity.

In a *diarrhoea* attended with Gripes, if it have its rise from Wind (as sometimes, the foresaid Author writes, it has) it may be discussed by giving Carminatives; but if it come from Acrimony of Humors, it must be tempered and corrected by anodyne, narcotick, spirituous and oily Medicines, as does he neglect divers external picks (of which I shall say more below, especially Clysters of Milk, adding Whites of Eggs, Turpentine, &c.

§. 18.

According to the Cartesian Hypothesis those pointed Particles that are in the first ways, or preexistent in the Mass of Blood, and cause a great disturbance, must be made dull, or as much as may be, must be carried off. Therefore at the beginning of Loosenesses they commend Rhubarb, Jalap, Castor eyes, mixt with other things. The vicious Acid must be corrected

aromaticks, and the spoiled Tone of the Stomach and Guts must be restored by moderate Astringents. When these things will do no good, they fly to Anodynes, which mitigate the Acrimony of all the Humors, that vellicate the nervous Fibres, and which remove spasmodick corrugations, yea, which a little fix the Animal Spirits flowing in impetuously, and so may be good.

In a Lientery and Coeliack Passion they prescribe all Balsamicks, called Stomachicks, used either externally or internally.

§. 19.

Now we will go to our own Cure. In every flux of the Belly therefore we use to give a convenient Purge at the beginning to such as are strong and grown, but to weakly Persons and Children we give a cleansing Clyster. If Bile abound, we advise a Drachm of Rhubarb with a Grain or two of *theriaca celestis*, or *pilulae stomachalis cum gummi mastiche*. In a ferrous Looseness we commend gentle Hydragogues, which carry off the reliques of the Serum by Stool at a little and a little; for instance, Powder of Jalap mixt with Cinnamon and Nutmeg. Yet in so great variety of fluent Humors we advise the method of Cure to be varied according to circumstances. Therefore in a bilious nature we use to give the following Potion;

Take of the best Rhubarb, not tosted one Drachm and an half, red Sanders fifteen Grains, Shells of Myrobalans half a Drachm, Cinnamon one Scruple, Salt of Wormwood half a Scruple. In-

fuse them for a Night in Water of Arsmart, or Mint, or Oak-leaves three Ounces in a warm place. In the Morning boyl it and strain it. Add of Syrup of Steel half an Ounce, burnt Harts-horn half a Drachm, red Coral prepared half a Scruple. Mix them. Make a Potion. Or,

Take of Root of Rhubarb two Drachms, Nutmeg half a Drachm, Salt of Tartar two Scruples. Infuse them for a Night in Water of Roses or Plantain what is sufficient. Add in the Morning of Syrup of Steel one Ounce. Mix them.

Or in form of a Powder.

Take of yellow Rhubarb one Drachm, Nutmeg one Scruple, burnt Harts-horn half a Drachm, prepared Pearl half a Scruple. Mix them.

Or if Serum abound.

Take of Conserve of red Roses one Drachm, Powder of Rhubarb, Jalap each half a Drachm, Salt of Wormwood half a Scruple, Oyl of Nutmeg two Drops, *confectio Alkermes* one Scruple. Mix them. Make a Bolus.

Or in form of a Powder.

Take of Powder of Jalap, Rhubarb each half a Drachm, *theriaca celestis* three Grains, Nutmeg one Scruple. Mix them, make a Powder.

The Clysters following, or some such like may be given to weakly People;

Take of the Decoction of Barly one Pound, Honey of Roses two Ounces. Mix them for a Clyster. Or,

Take of our laxative Powder six Drachms.

Take of Mechoacan, *chebuli*, Myrobalans moderately roasted each half an Ounce, Nutmeg four Scruples, Mace two Scruples. Mix them. Make a subtil Powder. The Dose one Drachm.

These things premised, we make diversion with Sudorificks and Diureticks, such as Decoctions of the Wood of *Guajacum*, Oak, and several others.

But to remove the Pains and Convulsions of the Guts, and to assuage the malignant sharpness and acidity that offends the Nerves, we frequently use the following Powder;

Take of *terra sigillata*, prepared Emerald, diaphoretick Antimony, Cinnabar of Antimony, *terra chatechu* each one Scruple, *laudanum opiatum* three Grains, Oyl of Cinnamon one Drop. Mix them for several Doses.

And if there be malignity, add to this Powder, some of the Backbone of a Snake, that so you may kill two Birds with one stone.

You may also give divers Carminatives and Medicines of Treacle, you may often repeat the Absorbents, adding some Bezoarticks, and things good for the Nerves;

Take of Essence of Treacle two Scruples, Balsam of Peru one

Scruple, anodyne Essence half a Scruple. Mix them.

The following Powder often good;

Take of Bezoartick Powder one Drachm, prepared Cinnamon of Antimony one Scruple, Castor half a Scruple, *laudanum opiatum* three Grains, Oyl of Cinnamon one Drop. Mix them.

You may meet with such Receipts among the most celebrated Authors. But because most of them then knew not the convulsive Motion, they omitted Antispasmodicks generally in their Receipts. And this is the reason, why we are so prolix in writing Receipts for the sake of young Beginners. We must therefore know, That the Stomach and Guts receive great relief by Opiates and balsamick Aromaticks. For they gently assuage the membranous and sensible fibrous Parts; so that after the taking of them all painful irritations generally cease. For this end I usually give the following balsamick, opiate mixture with great success;

Take of Conserve of Roses, Chocolate of Sevil each two Ounces, *crocus Martis*, prepared Amber each one Drachm, native Cinnabar two Scruples, Balsam of Peru one Drachm, *laudanum opiatum* A. S. six Grains, *diacamon reg.* six Drachms. Mix them. Or,

Take of Conserve of Roses two Ounces and an half, burnt Hart-

horn prepared two Drachms, *terra vitrioli dulcis* one Drachm, one anodyne Sulphur of Vitriol our Scruple, Mother of Pearl prepared half a Drachm. With Syrup of Coral, Quinces, Steel, &c. make an Electuary. The Dose one Drachm.

The anodyne Sulphur of Vitriol prepared my way is a great Secret with me, and I can safely say, it never failed me. And you may give this or the like liquid Electuary;

Take of Conserve of Comfrey, Mint each one Ounce, Extract of Tormential, Salt of Coral, Tincture of Mars, Amber each one Scruple. Make them into a liquid Electuary with styptick Syrup.

In a Lientery and *Cœliaca* we depend most upon Balsamicks, and we give the following styptick stomachick Liquor;

Take of *terra chatechu*, Root of Aron, Tormential, Pœony each what you please. With the Essence of Balsam of Peru, volatil Spirit of Vitriol and Spirit of Mastich mixt, what is sufficient, adding of Oyl of Cinnamon, Mint, Nutmeg each a little, make an Extract, as above.

If you add to this Liquor the anodyne Tincture, you will do feats in the foresaid Diseases, especially there be a Salt and biting Serum, which you may judge by the excoication and inflammation. So you may add *laudanum cydoniatum* or *seriaca celestis* to the precipitant powder. And here you must take notice. That you should not pre-

sently desist from such Medicines, but repeat them every five or six hours, and continue them for a good while: and if there be much Serum, more solid than liquid things should be given.

We commend likewise our corroborating Liquor, especially in a *Cœliaca*, and a Lientery, to correct and encrease the Ferment of the Stomach, which has also a faculty of tempering and asswaging the sharpness of the bilious Humor: Or,

Take of Spirit of Wine rectified, sweet Spirit of Salt each one Ounce. Mix them, and rectify them. Then you will have of these Spirits one Ounce and an half. Then,

Take of Spirit of Wine rectified half an Ounce, to which add of Oyl of Cinnamon twelve Drops, Cloves six Drops, Roses four Drops, Extract of Lignaloës two Scruples. After Solution mix them with the aforesaid Ounce and an half of Spirit. Digest them some days. The Dose 20 or 30 Drops.

For bridling the fury of a bilious Flux and tempering the sharp, salt *lixivium*, Universals premised, I highly value Whey, oily Emulsions of the four cold Seeds, Tincture of Roses, Testaceous Powders, Opiates, &c.

In a *diarrhœa* also, which comes from a vitriolick Acid, where the Excrements are black, we recommend the same Medicines, and all volatil oily Spirits.

If the Bile be infected with any poysonous sharpness, which may easily be observed by the Sym-

ptoms,

C H A P. IV.

Of a Vomiting and Looseness.

§. I.

AMong very violent and acute Diseases of the Belly, which afflict Mankind, a Vomiting and Looseness is not the least. It is called *Cholera* from *Χολή* *cholera*, and *χολα*, to flow, wherefore *Aurelian* calls it *fellisflua passio*, some call it *fibris cacatoria*, some *cholericæ passio*, others give it other names, and those that would know them, may consult Dictionaries: For we are more intent on things than words. We will proceed therefore to the definition. I think this may serve, It is a depraved and convulsive Motion of the Stomach and Guts, yea, of the Mesentery, Pancreas, &c. arising from the spasmodick contraction of the Fibres of the Stomach and Guts and other Parts, by which perverse and contrary Motion corrupt Humors are violently voided upwards and downwards. And Physicians make several sorts of this Disease; one sort is periodical; another continual; one malignant; another benign: But the most remarkable and received distinction is into a moist and dry *Cholera*. The latter is, when Wind is so pent

up in the Stomach and Guts, that it can no way get out. But because this belongs rather to a Tympany or Wind Colick, we will pass it by, and rather insist upon the explication of the nature of a *cholera*, first of all considering the Part affected.

§. 2. *Part affected.*

NOW the Part affected according to *Galen*, is both the Orifices of the Stomach, and most Physicians are of his Mind. *Celsus* thinks this Disease lies in the Stomach and Guts. *Hilmont* accuses the *Pylorus* of the Stomach for the Part principally affected. We hold, That the Guts, Pancreas and Gall-bladder are as well Parts affected as the Stomach, because first, there are Signs of the Guts being affected, namely, rumbling in the Guts. And secondly, we have found the Guts gangrened in such as have died of it. But the Parts chiefly affected are the Fibres of these Parts, and the Glands of the Guts, in which the peristaltick Motion may as well be inverted, as it is certain, that there are nervous Fibres in the Guts, Pancreas, and Gall-

Gall-bladder, as well as in the Stomach: And likewise these two Champions, the Bile, and pancreatic Juice meeting in the *duodenum* may occasion this Disease. So that there is no reason, why we may not take the Guts, *Pancreas* and Gall-bladder for Parts affected, as well as the Stomach. This will be more apparent from the following Case.

A Case.

A Woman twenty Years old, of a cholerick Constitution, accustomed her self to eat sweet and fat Meats, and raw Fruit, was in Summer-time taken with a violent Tooth-ach (for long ago *Galen de art. med. lib. 8.* knew that any Pain causes Defluxions) her Spirits being enraged by the pain, when she went to bed, she found a violent pain in her Head, with a great heat in her Body, nauseousness, thirst, wakefulness, Pain at her Heart and Stomach: A little afterwards she vomited and went to Stool frequently, so that she filled several Pots. Her Excrements were liquid, bilious and ash-coloured, and came away with much Wind, Griping and Oppression of the Heart. She fainted, was in a cold Sweat, and grew very weak. These things are sufficient to show what it is, especially if the following Paragraph about the Diagnostick be perused.

Diagnostick.

And it is highly necessary, since according to *Trallianus* the Diagnostick is the foundation of a right Cure; for any one may easily judge how great the necessity and

utility of diagnostick Signs are; wherefore it will be worth our while to do our endeavour to describe them aright. The Disease is thought to be imminent by a violent pain in some Part, especially in the Loins, sower and nidorous Belchings, Rumbling in the Guts, pushing up of the Belly, Anxiety of Heart, Head-ach, plentiful eating of corruptible Meats, Cucumbers, Melons, all horary Fruits, and in a word, all such as are commonly called cold ones. The following Signs denote it to be already present. Biliary acid and nidorous Stuff is voided by Vomiting and frequent Stools for several hours, yea, and days, just as if the Patient had taken Bile; there are prickings in the Stomach and Belly; the Excrements are at first liquid, afterwards they are thicker and better coloured, sometimes they are tinged with citrine, green, leek-green, blue (such as I saw the same Summer wherein I wrote these things) black and bloody colour; and sometimes they are voided white, with Wind and the Gripes; yea, if there be malignity, they incline to an ash-colour, and keep that colour a long time. There is also a great thick Urine there is little or none, because all the Liquids are elicited out of the Body upwards and downwards by other ways. The Body all over in a cold Sweat, the Pulse is frequent and little, sometimes it ends in an intermitting one; then comes cold in the extreme Parts, Swooning, Hiccupping and Convulsions; when the Disease encreases there is often a Convulsion and drawing of the Nerves, but especially of the Calves of the Legs, and now and then of the Arms; but that of the Calves is

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the Legs is a Symptom peculiar to this Disease.

§. 3. Cause.

These were the Signs, now we will search out the immediate cause of this Disease, in the order which we have hitherto observed. And first of all let us hear the Opinion of the *Ancients* concerning this Matter. They say, That Bile is the cause of this Disease, and thence they gave it its name. This Bile, they hold, is gathered all over Mens Bodies in great quantity, and is poured out of its Bladder into the Stomach and Guts. And they hold, That this hinders the Retentive Faculty, and they prove it by this, Because this Disease rises from bad, corrupt, sweet and bilious Food. Wherefore if the Bile make its attempt to escape by the Mouth of the Stomach, they say it is vomited. But if it be gathered in the Guts, they say it is voided by Stool. Wherefore they blame a hot intemperature of Stomach, arising, to wit, from Bile. Moreover they assert, That sometimes an ill Humor falls from the Head upon the Stomach, and so the expulsive Faculty is hurt.

§. 4.

Let us now proceed to *Paracelsus* his Opinion, who differs in Opinion, and holds, That the *cholera* is a sort of *morbus dissolutus*, and that an aluminous Salt is wanting in the Stomach; so that on the contrary the entallick Salt, which exerts upwards and downwards, stimulates the expulsive Faculty, for according to him, where these Salts are not, there is neither Vomiting nor Looseness. So that it appears

from what has been said, That a *Cholera* and other fluxes of the Belly must be reckoned to come from the predominance of a saline Principle, and indeed of a dissolved Salt either separated or corrupted. For this Salt is sometimes purgative, helleborine, sometimes antimonial, sometimes scammoniate, contained either in the Food that is taken, or in the internal Principles of the Body. Which Salts, if they be dissolved, do breed these Laxities and frequent Stools.

§. 5.

Helmont says, That the Blood in a *Cholera* turns into a pungent, corroding, watry Liquor, and not, as the Schools would have it, into a bitter Excrement. For when any thing putrefactible, or, as he speaks, cadaveratible is taken into the Stomach, wanting its digestive Ferment, then it putrefies and digests not. Whatever also a *Cholera* touches, it taints and turns it into Poison, whence the disturbance of the *Pylorus* and Guts flows, and all Liquids are voided upwards and downwards.

§. 6.

Mullis thinks, That in a *Cholera*, the fleshy and moving Fibres of the Stomach and Guts are by remote causes put into solutive Contractions of the Belly. For the violent Passions of the Mind and Body often cause it, to wit, inasmuch as the Spirits in the Head or in some principal Parts of the nervous *Appendix*, being greatly disturbed, and presently by the Passages of the Nerves or nervous Branches communicating their disorder to the Spirits that reside in the

the Stomach and Guts, do put them in Convulsions. Wherefore he shows, That this Disease is a Spasm or Convulsive Motion of the Stomach and Guts, which is excited, when a vitious Chyle, made so by the Food, or the fermentative Juice of the Stomach degenerates into an Acid, austere or bitter, or otherwise troublesome Humor, and there irritates. Also an irritative Humor, according to him, is sometimes poured into the Stomach and Guts out of the Arteries; Bile likewise and the pancreatick Juice, sometimes severally, sometimes jointly, being exalted by a mutual effervescence in the Stomach, do put the Fibres into vomitive and laxative Spasms. And sometimes a turgescient Matter voids its Recrements, since it cannot expel them by transpiration, into the Cavity of the Stomach and Guts, by the Branches of the Coeliac Artery, so that their Coats being notoriously vellicated, do suffer horrible Vomitings and choleric Passions, by reason, that is, of the animal Spirits being some where disturbed and fired. And he holds, That other Spirits residing in the Stomach and Guts may also be affected either by continuity of Fibres or communication of Nerves, and may so be put into vomitive and purgative explosions.

§. 7.

Sylvius blames an effervescence of Humors caused amiss in the small Gut, and sharp Bile, and then a violent Motion of disturbed Humors, caused by horary Fruits, that are wont to decay. For this Disease is apt to come from Humors preexistent in the Body,

or upon an external Error committed in Diet. And both sharp and bilious Humors are violently and abundantly voided both upwards and downwards, together with great Oppression at the Heart. Wherefore he reckons that this Disease proceeds from the peristaltic Motion of the Guts, inverted in part.

§. 8.

The Cartesians say, That in this Disease the Fibres of the Stomach and the *intestinum duodenum* are contracted upwards, the cutting, acute, pointed and otherwise unequal Particles; and the other Parts both upwards and downwards, and so the common Humors are voided. And they hold, That this vellication of the Fibres cannot last long without a profuse effusion of the Animal Spirits, thereby disturbed in their order and motions, and do strangely stir up a spasmodick Motion by their inequigruous assaults; whence proceeds this disturbance of the whole Animal oeconomy, just as if the Patient had drank Poison.

§. 9.

WE will now enquire what forces appear in our Disease, that is, in a Vomiting and Looseness. I make no mention but the principal is an Acid, which yet varies very much, and is mixt with Bile, or other humors, line, earthy Particles, impregnated with divers Meats, which according to their divers mixture and quantity make the Disease either malignant or benign, especially if they are mixed with a separate Acid. Now

Mass of malignant contrary Humors are gradually gathered in the first Region of the Body, or it flows thither, either critically or symptomatically, and stimulates the Guts to a perpetual ejection. Sometimes it is an additional corrosive of the Alkali of the Gall, so corrodes the Guts and their Fibres, that it causes a Gangrene, which we, as was above said, not long since found in one that was opened, who died of this Disease. This *Alkali*, when it affects the Blood and raises a Fever, often hastens death. For the Bile, being made too sharp, does by its saline Prickles prick and velli-ate its own *capsula*, and the nervous Fibres of the Stomach, Guts and *Pancreas*; by which vellicati-on the Animal Spirits are disturb-ed, wherefore they flow in more impetuously, and so cause a spasmodick Motion, which must needs be attended by frequent and violent Vomiting and Purging. By this contraction all the contained humors must of necessity be cast out of their Vessels, and at last out of the Body. For all the violent Symptoms in this Disease may easily be derived from the Bile being made too violent and sharp. And if the Bile be imbued with a singular poysonous sharpness, then the Disease is more malignant; for whence should a violent evacuation upwards and downwards proceed but from the saline Prickles, which stimulate and corrugate the orbicular Fibres of the Stomach and Guts, and the intestinal Glands? Whence, say, this pricking Pain, nausea and anxiety: Come they from these Prickles? And if the viscid Matter concur, that, if it is exalted into Vapors by

Fermentation, causes roaring and rumbling in the Guts, familiar to choleric People. According to the diversity of the procatactick cause, the Excrements are voided different in consistence, colour, smell, &c. If the Patients also have drunk much Liquids, then they are to be infected with the exalted Bile, both as to taste and colour. This Medley being got into the Stomach doth further corrupt the Ferment of the Stomach, which is already corrupt, whence comes want of Appetite. The Hic-cough is also raised by these saline Prickles, while they vellicate the Stomach, and by consequence put the Diaphragm into a Convulsion. This bilious rage of the Stomach and Belly (if you mean the procatactick cause) is easily produced by excessive eating of horary Fruits and other meats, that are apt to corrupt, such as are sharp and crude, sweet and too fat, Sawces and Spices. Among horary Fruits these are apt to cause this Disease, Plums, Cherries, Grapes (especially before they are ripe) also Cucumbers, Melons, Pumpions, Leeks, Onyons, Cabbage, especially pickled after the *German* way, the Row of a Barbel, as *Guldenkleee* testifies. Among aromatick things these are bad, Pepper, Horse-radish, also all purging Medicines, Poysons, cold Water, new Wine, Spaw-Waters drunk unseasonably, and other things which may contribute their Parts, of which we shall speak more largely, when we treat of Diet. But let us go to the

§. 10. Prognostick.

PROGNOSTICK, that Delphick Oracle of Physicians. A Vomiting and Looseness therefore is a very acute Disease, which kills a Man not only in a very few Days but Hours. And if no evident cause have preceded, then it is more acute and malignant, than that which proceeds from corrupt Meat, or from drinking of Poyson. Moreover also this Disease threatens death, if there be a weak Pulse, Palpitation of the Heart, Swooning, Hiccough and Convulsions. Also death is at hand, if the Pulse intermit, if the Urine be livid or black, and if the extreme Parts be cold. Yet we must here take special notice that of this as of other acute Diseases Predictions are not always safe, as *Hippocrates* says. I can attest this upon my own experience in my dearest Wife: for in this Disease there concurred, great weakness, cold Sweats, Palpitation of the Heart, Swooning, loss of Speech; and yet by the use of proper Medicines she escaped the Jaws of death. This also is a formidable Disease in old Men; but they are seldom taken with it. It uses to turn to heat of Urine or the Strangury: and I have known the event of this prove well.

§. 11. Dietetick Cure.

THE Cure follows the Prognostick, and 1. the Dietetick. The Air must be temperate and enclining to cold; on the contrary an over hot one must be avoided; for it encreases Bile, and makes it more sharp and volatile; it destroys the Acid, which is its stay, and it

dissolves and dejects the Serum and its Ferment. Wherefore *Hippocrates* was not mistaken when he says, That Men are hottest in Winter and Spring, therefore they have more need of a staid Food, because then an Acid is most in its vigor. He says, Epid. l. 10. a Cholera comes most in Summer, less in Spring and Autumn, least of all in Winter. For Summer makes all the Humors sharp, and hence things that are taken the easiest corrupt in Summer time, and degenerate into biliousness; and this is the reason that Fluxes of the Belly are more frequent in Summer than in Winter.

A little Meat must be given, that easy of Digestion. Let the Broth be tempered with tart Wine. The Bread must be of Wheaten, the Juice of Pomegranate or of other Acid, which is a little digest. But all fat, sweet and staid things must be utterly avoided. Oyl, Butter, Pepper, Ginger, Mustard, and all sharp distilled Oyls, all horary and oylly Fruits, as said before, to wit, Melons, Pumpkins, Cucumbers, &c. as likewise things that are apt to corrupt, among which are Swines flesh, Milk-meats, Fishes, namely Eels. And all violent Purgers must be forborn.

As for Drink, it must be of Wine of Quinces, or some that is tart and subafstringent. A Julep made of Water of Marsh-mallows, sweet, Burdock, *Scordium* and the spirit of *terra sigillata*, or Ale, Milk or Chalybeate Drink, let the Patient wash his Mouth oftner with tart things, than with much. On the contrary all staid and rous Wines, new Wine, new

de and several other crude
are hurtful. Nor must the
Stomach be loaded with an excess-
quantity of potent Matter;
thereby the Ferment of the Sto-
mach is drowned, and rendered quire
useless. Rest must be advised. Sleep
is very good. On the contra-
long watchings sharpen and in-
crease the Bile.

Let the Passions of the Mind be
restrained, especially anger, sadness
frightfulness; for they greatly
increase Bile. They quicken the
Circulation and Motion of the Blood,
so breed more Bile. And this
is all we have to say of the Diete-
tary Cure.

§. 12. Pharmaceutick Cure.

Now the Pharmaceutick Cure
follows; and first of all ac-
cording to the Ancients, who in
beginning of this Disease, while
excrement Matter may be any
thrust down to the lower Parts,
the strength is not too much
lost, do give some proper purg-
ing Medicine; adding things to
correct the Acrimony of the Hu-
mors. Their purging Medicines
were these following, *cassia fistula*,
enna, Rhubarb, and they would
be this particularly observed,
that a Vomit must not be immedi-
ately stop at the beginning, but ra-
ther promoted by drinking some
of Flesh or Chicken. But if
Vomiting be very violent, they
endeavour to avert the tendency of
Matter upwards by the follow-
ing or some such other Cly-

ster Centaury, Wormwood, Mint;
Flowers of Chamomil, Melilot
each one handful, choice Rhu-
barb two Drachms and an half,
Polypody three Drachms. Boyl
them in a sufficient quantity of
Water. Add to the Colature of
Oyl of Mint, Chamomil each
one Ounce and an half, generous
Wine two Ounces, *diacatholicon*
three Drachms. Mix them. Make
a Clyster.

For if the morbidick Matter be
in a great measure already evacua-
ted, as it is usually in four and
twenty hours, then they use such
Medicines as may avert the Motion
of the Humors from the Sto-
mach; and they draw the Matter
to the lower Parts by the above-
said Clyster, or by Ligatures and
Frictions, and things that shall be
hereafter men ioned. Moreover
they try to stop the impetuous flux
of Humors, and to strengthen the
Stomach and Guts by strengthening
Medicines, such as Syrup of dried
Roses, of Juice of Pomgranates;
Quinces, Limons, *discodium*, can-
died Citron Peel, Conserve of Ro-
ses, a Cup of Cold-Water, which
yet the Patient must drink mo-
derately and at times, Treac-
le, Mithridate, white Poppy, red
astringent Wine mixt with Chaly-
beate Water. A Clyster especially
of the heads of white and red Pop-
py stops the Motion of the Humors
and causes pleasant sleep. The An-
cients have found by experience,
that throwing cold Water suddenly
in ones face, has sometimes stoppt a
Vomit.

Among Externals they place va-
rious Unguents, Cataplasms, Pla-
sters, &c. whereof there is an
infinite number, a *dropax* especial

§. 10. *Prognostick.*

Prognostick, that Delphick Oracle of Physicians. A Vomiting and Looseness therefore is a very acute Disease, which kills a Man not only in a very few Days but Hours. And if no evident cause have preceded, then it is more acute and malignant, than that which proceeds from corrupt Meat, or from drinking of Poyson. Moreover also this Disease threatens death, if there be a weak Pulse, Palpitation of the Heart, Swooning, Hiccough and Convulsions. Also death is at hand, if the Pulse intermit; if the Urine be livid or black, and if the extreme Parts be cold. Yet we must here take special notice that of this as of other acute Diseases Predictions are not always safe, as *Hippocrates* says. I can attest this upon my own experience in my dearest Wife: for in this Disease there concurred, great weakness, cold Sweats, Palpitation of the Heart, Swooning, loss of Speech; and yet by the use of proper Medicines she escaped the Jaws of death. This also is a formidable Disease in old Men; but they are seldom taken with it. It uses to turn to heat of Urine or the Strangury: and I have known the event of this prove well.

§. 11. *Dietetick Cure.*

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As for Drink, it must be of Wine of Quinces, or some other that is tart and subastringent. A Julep made of Water of Marsh-mallows, sweet, Burdock, Scordium and the spirit of terra sigillata, or Almonds Milk or Chalybeate Drink. Let the Patient walk his usual course oftner with tart things, than with much. On the contrary all hot and rous Wines, new Wine, new

side and several other crude
inks are hurtful. Nor must the
Stomach be loaded with an excess-
quantity of potent Matter;
thereby the Ferment of the Stomach
is drowned, and rendered quite
useless. Rest must be advised. Sleep
is very good. On the contrary,
long watchings sharpen and increase
the Bile.

Let the Passions of the Mind be
restrained, especially anger, sadness,
frightfulness; for they greatly
increase Bile. They quicken the
Circulation and Motion of the Blood,
and so breed more Bile. And this
is all we have to say of the Dietetic
Cure.

§. 12. Pharmaceutick Cure.

Now the Pharmaceutick Cure
follows; and first of all according
to the Ancients, who in
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the peccant Matter may be any
thing thrust down to the lower Parts,
if the strength is not too much
lost, do give some proper purg-
ing Medicine; adding things to
correct the Acrimony of the Hu-
mors. Their purging Medicines
were these following, *castia fistula*,
rhubarb, and they would
have this particularly observed,
that a Vomit must not be immedi-
ately stop'd at the beginning, but ra-
ther promoted by drinking some
quantity of Flesh or Chicken. But if
the Vomiting be very violent, they
endeavour to avert the tendency of
the Matter upwards by the follow-
ing or some such other Cly-

ster Centaury, Wormwood, Mint,
Flowers of Chamomil, Melilot
each one handful, choice Rhubarb
two Drachms and an half,
Polypody three Drachms. Boyl
them in a sufficient quantity of
Water. Add to the Colature of
Oyl of Mint, Chamomil each
one Ounce and an half, generous
Wine two Ounces, *diacatholicon*
three Drachms. Mix them. Make
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For if the morbidick Matter be
in a great measure already evacua-
ted, as it is usually in four and
twenty hours, then they use such
Medicines as may avert the Motion
of the Humors from the Stomach;
and they draw the Matter
to the lower Parts by the above-
said Clyster, or by Ligatures and
Frictions, and things that shall be
hereafter mentioned. Moreover
they try to stop the impetuous flux
of Humors, and to strengthen the
Stomach and Guts by strengthening
Medicines, such as Syrup of dried
Roses, of Juice of Pomegranates,
Quinces, Limons, *disco diam*, can-
died Citron Peel, Conserve of Ro-
ses, a Cup of Cold-Water, which
yet the Patient must drink mo-
derately and at times, Treacle,
Mithridate, white Poppy, red
astringent Wine mixt with Chaly-
beate Water. A Clyster especially
of the heads of white and red Pop-
py stops the Motion of the Humors
and causes pleasant sleep. The An-
cients have found by experience,
that throwing cold Water suddenly
in ones face, has sometimes stop'd a
Vomit.

Among Externals they place va-
rious Unguents, Cataplasms, Pla-
sters, &c. whereof there is an
infinite number, a *dropax* especiall

ly of Pitch, and Oyl of Quince applied outwardly, they say, stops a Vomit excellently. So *Archigenes*, a very ancient Physician, durst in the greatest heat apply cold Water, yea cooled in Snow, to the Stomach, either in a Cloth or a Bladder; but try it, who dare. Certainly there is great danger of expelling all the innate Spirits. They advise the application of a Cupping-glass between the Stomach and Navil; they also prefer *ceratum stomachicum Galeni*, *emplastrum pro Stomacho Mesues*, *mastichinum*, and *de crusta panis*. Lastly, they hold, that care must be taken of the Symptoms which occur in this Disease, namely Swooning and Convulsions, whose Cure may be gathered from what has preceded.

§. 13.

THe *Paracelsian* Chymists hold, That every lax Disease is from Salt, and they say, there can be no going to Stool without Salt; yea, their Master *Paracelsus* contends, That the expulsive virtue is in the very Dung or Salt of a thing, and that every Flux arises from the Stomach, that is, because the Stomach separates not aright, and therefore they will have the Cure directed only to the Stomach, contending, that the Cure is performed by Salts, and that the Salt must be rectified again, and the dissolved must be separated from the entire: Afterwards a sulphureous Cure ought to follow, as a confirmation of the Operations in the Salt. And yet in his second tract *de vita* he says, we must first purge with proper Medicines, and he writes, that binders unseasonably used in all excessive Fluxes of

the Belly do more hurt than their famous things to stop Flux and strengthen the Stomach and Guts, are Martial Medicines such as *crocus Martis*, *rindeuritis*, *terra sigillata* also and *lata*, *Magistery of Coral*, and these may be reckoned *Cadmia*, *Loadstone*, *Nitre*, *Talc*, *Bones of the Microcosm*, *Rectified Opium*, true *Loadstone*, precious Stones, prepared Gold which are generally in this commended by *Paracelsus*.

§. 14.

Alls, besides diversatives given in the Vomiting, Clysters and Stypicators, especially to moderate the rage of the Spirits, which is very urgent, does commend *danum opiatum*, *cydoniatum* and *tarisatum*, that stout coagulate the Animal Spirits, and thus adds divers Antispasmodics, one may easily gather from what shall be hereafter mentioned.

§. 15.

Sylvius uses the following Method of Cure. When there is an irritation of the Guts to motion of their peristaltick Motion depends upon a vicious effluvia of sharp Humors meeting together, then these sharp Humors must be tempered and guided with their violent Effluvia a peccant Acrimony therefore of saline or acid Humors commends the following to be taken by Spoonfuls at intervals;

Take of *Dioscordium* two Drachms, *confectio de hyacintho* one Drachm, Syrup of white Poppy one Ounce, Plantain-Water two Ounces, Fennil-Water one Ounce. Mix them.

Then the Humors so corrected may be evacuated by Cholagogues. If the peccant Matter tend upwards, he makes no Scruple of giving a gentle Vomit, mixt with Opiates: for instance;

Take of *saccharum vomitivum* two Drachms, *laudanum opiatum* one Grain, Mint-Water what is sufficient. Mix them.

But if the Acrimony of the Bile will not yet abate, it may be corrected with the following, or some such-like mixture;

Take of Water of Plantain, Purslain each one Ounce, sweet Spirit of Salt half a Drachm, *dioscordium* one Drachm and an half, Syrup of Purslain one Ounce. Mix them.

Whenever a *Cholera* arises from any Fruits, then the excessive Effervescence of the Humors is best checked by Opiates, among which *laudanum opiatum* is the last refuge. It is checked also by the same Opiates, whether it arise from the present cause, or from a too large Dose of Vomiting Medicines, or from Poison: for which end our Author commends the foresaid Medicines, a Grain or two of *laudanum opiatum* being always added. For Opiates do as well temper all Acrimony, and quiet the consequent Effervescence, as they lay asleep the external Senses. But if the Di-

sease proceed from Poison, that is from Orpiment, Mercury sublimate, or Arsenick; then oyley things, namely Broths, and milky things, especially Butter-Milk must be given, which must be continued as long as Pain, Nauseousness or Vomiting remain.

§. 16.

THE Catechists, to check the fury of the Animal Spirits, that are disturbed, and invade the Stomach and Guts with incongruous Particles, and put them into a spasmodick Motion, commend Bezoartick Opiates: for instance;

Take of *Dioscordium* half an Ounce, Oriental Bezoar-stone half a Scruple, *theriaca oelestis Hanovienfis* seven Grains. Mix them. Make an Opiate for twice taking.

In this case also they magnify all ponderous things, such as Crystal, Bole-Armenick, Blood-stone, *terra sigillata*, and a thousand other things which may be found in the following Paragraph.

§. 17.

NOW, lest we should fall rashly on the Cure, will proceed in order: for this Disease varies according to the variety of Causes and Symptoms. If therefore a *Cholera* arise from corrupt Meat, which sticks still in the Stomach, and the Patient be prone to vomit, you may safely give *Sylvius* his Vomit, or this that follows, especially if you have any suspicion of Poison: for by benefit of this not only the peccant Matter that vitiates the nervous Fibres of the Sto-

mach and Guts is cast out, but these Fibres are pacified, and so the Pain ceases. But you must take great care, that you make not the Animal Spirits more unquiet, and so encrease the Disease ;

Take of the emetick Syrup three Drachms, *laudanum opiatum* one Grain, Salt of Wormwood three Grains. Mix them. Or,

Take of emetick Tartar one Grain, Salt of Wormwood two Grains. Give it in Mint-Water or Barley-Cream.

And we may give a Vomit of Oyl Olive or of Sweet Almonds.

But if nature evacuate sparingly downwards, and with great perturbation upwards, then, besides loosening Clysters, of Whey, sweet Milk, Mutton-broth or the emollient Decoction seven Ounces, Oyl of Violets, brown Sugar, each one Drachm, the Yolk of an Egg, or of Whey and Syrup of Roses solutive, Ligatures and Frictions will be proper. When the Vomiting is greater and the Stools less, divers Laxatives are proper, among which we highly value Whey of Sheeps Milk, with a little Pulp of Cassia, which both takes away the Heat and Pain, and gently loosens the Belly. Yet in this case Alexipharmacks must always be added. If the Bile be thick, Honey of Roses or Solutive will be proper with Whey, or choice Rhubarb one Drachm, Cinnamon one Scruple. Mix them. You must never give Repellents and Strengtheners at the very first, but if the strength will bear it, you must wait a few hours, till most of the Matter is carried off. For you must take dili-

gent heed, that you keep not the Bile in. We suspect Manna and Sugar, because they dissolve the Tone of the Stomach, and vitiolate the Matter with the Bile. But as the Matter is evacuated, by degrees you may proceed to Corroboraters, and things to stop Vomiting; and then all the Physician has to do, will be to remove the sharp Matter, which you may do by giving a Decoction of Bark and Syrup of Pomegranates frequently. This following may be given conveniently to stop the Vomiting ;

Take of Oyl of Nutmeg by expression fifteen Drops, *laudanum opiatum* a Grain or two. It may be often repeated.

The Ancients commend a Decoction of Mint with Juice of Pomegranates, which is also affirm'd. They likewise commend the following Electuary ; whereby I can assure I have cured several ;

Take of old Conserve of Roses one Ounce and an half, dissolved in half an Ounce, red Coral, *Martis* each one Drachm, prepared Pearl half a Drachm, Crystal one Drachm, Syrup of Pomegranates and Mint which is sufficient. Mix them. Of this Electuary take the quantity of a Chestnut.

The use of rock Crystal is so excellent either a Drachm or it alone or with Powder of Sanders, several times repeated. The following Emulsion is good.

Take of sweet Almonds one Ounce, white Poppy Seeds half an Ounce. Mix them. Make an Emulsion.

If Bile be too fierce, and Vomiting be the more violent, you may order the following Clyster;

Take of Root of Cinque-foyl, Butter-bur, *Scorzonera* each two Drachms, Leayes of Orpine, Calamint, Ground-Ivy, Plantain each one handful, Cordial Flowers, Marigolds each one Pugil, Pomegranate Flowers two Pugils, Citrine Myrobalans one Drachm and an half, Fenil Seed half a Drachm. Boyl them in Mutton-broth. Add to half a Pound three Ounces of the Colature of *mil rosatum laxativum* half an Ounce, *miclta Nicolai* half an Ounce, Oyl of Sweet Almonds one Ounce, Turpentine dissolved in the Yolk of an Egg two Drachms. Mix them.

Or one more abstergent;

Take of Root of Marsh mallow, Bugloss each half an Ounce, Leayes of Pellitory of the Wall, Mallow each half an handful, Flowers of Chamomil, Colts-foot each one Pugil. Boyl them in a sufficient quantity of Barly-Water. In ten Ounces of the Colature dissolve of brown Sugar one Ounce, Turpentine dissolved in the Yolk of an Egg half an Ounce. Mix them. Make a Clyster.

These Clysters premised, we may berke our selves, whatever some Physicians say to the contrary, to Clysters, that are more astringent

and edulcorating. Here is a Receipt or two for young Physicians.

Take of Root of Tormentil, Bistort each half an Ounce, Leayes of long Birthwort, Silver-weed, Sannicle each half an handful, Flowers of red Roses, Pomegranate each one Pugil, Berries of Sumach two Drachms. Boyl them in sweet Milk Chalybeate. In nine Ounces of the Colature dissolve of Deers, Suet one Ounce, Juice of narrow Plantain new drawn one Ounce and an half, the Yolk of an Egg, *laudanum opiatum* one Grain and an half. Mix them. Make a Clyster. Or,

Take of a Decoction of Bury, &c. new Treacle three Drachms. Mix them. Make a Clyster.

The more celebrated internal Astringents, are, Juice of Minor, Spirit of Mastich, Juice of Roses, prepared Pearl, red Coral, its two-fold Tincture, *crocus Martis*, *terra sigillata* and its Spirit, Powder of Liquorice, with Cinnamon and Saavings of Ivory, all acid Juices with astringent Powders, and odoriferous things, and a thousand others. But Opiates excel them all, especially the *laudanum opiatum cydoniatum Hoffmanni* and *theriaca celestis Hanovienfis*; which yet in the progress of the Disease must be given with caution, and they must be often repeated. *Pilula diascordii Sylvii* are of approved use, and so is *theriaca smaragdina D. Petri à Castro*, especially if there be Convulsions.

Oftentimes, I may say always in a manner, malignity accompanies a Cholera, depending upon a too

volatil Acrimony, which must be driven out by Sweat; to which end the following or some such like mixture will be proper;

Take of Water of the Velvet of Harts-horn one Ounce and an half, Bur-dock compound one Ounce, Mastich six Drachms, volatil Salt of Harts-horn six Grains, *scordium* half a Scruple, prepared Crystal half a Drachm, best Lignaloës one Scruple, *tinctura bezoartica Michaelis* six drops, *syrupus totius citri* one Ounce. Make a mixture for six and thirty times.

Sweats of Treacle after the tempering of the Humors are good.

For the ordinary drink in this case a Decoction of *Scorzonera*, Harts-horn, Berberries and Myrtles with the addition of Spirit of *terrya sigillata* is good, also a Decoction of Clove-gilli-flowers is good.
Or,

Take of Mastich two Drachms, styptick Liquor one Drachm. Mix them. The Dose is from twenty to thirty Drops in Broth or some other Vehicle. Or,

Take of Spirit of Mastich half a Drachm, Vitriol of *Mars* two Scruples. Mix them. Or,

Take of Essence of Mint half a Drachm, Spirit of Mastich one Drachm, Vitriol of *Mars* one Scruple. Mix them. Or,

Take of rock-Crystal one Scruple, Oriental Bezoar and Occidental each two Grains, Harts-horn philosophically prepared sixteen

Grains, Crabs-eyes one Scruple, *laudanum opiatum* two Grains. Mix them. Make a Powder, divide it into two equal Parts.
Or,

Take of Water of Mint, *cinna cydoniati* each half an Ounce, Ivory prepared without fire, the giftury of Coral with Juice of Citron two Scruples, prepared Emerald one Scruple, Juice of Coral one Ounce. Mix them. Or,

Take of Mother of Pearl, real Coral, Pearl, *terra sigillata* each one Scruple, *theriaca castilla* two Grains. Mix them. Make a Powder. Or,

Take of Crystal of *Mars* two Grains, *laudanum opiatum* two Grains. Mix them. Or,

Take of Tincture of Opium half a Spoonful, Camphore six Grains, Oyl of Nutmeg seven Grains, Conserve of Roses what is sufficient. Mix them. Or,

Take of *pulvis antidyfentericus gustanus* half a Drachm, real Coral, Crabs-eyes prepared, Ivory prepared each half a Scruple, *crocus Martis astringens* two Grains. Mix them. Make a Powder for six and thirty Doses.

To this end Vescatories may be applied to the Wrists or Ankles, if there shall be occasion.

We obviate Oppression at the Heart and Swooning with Juleps, Emulsions made of sweet Almonds with Barly and Cinnamon-Water, or other known Cordials before mentioned. For the poorer

Decoction of Agrimony with
Saum or Cinnamon-Water may be
prescribed; and Syrup of Pome-
granates is good. Among Exter-
nals these things strengthen the
Stomach, Plaster of Gum caranna,

de crusta panis, tacamahaca, Bals^a-
mus and Emplastrum stypticum myn-
sichti. And a Cataplasim of the
Crumb of Bread made with Aro-
maticks, applied all over the Bel-
ly, will do good.

D d 4

CHAP^r

CHAP. V.

Of a Dysentery, or the Bloody-Flux.

§. 1.

A Dysentery derived, of *Dys* and *Enter*, by Cornelius Celsus is defined to be, Gripes, whereby the Fibres of the Guts are corrugated, twisted, and vellicated, or an exulceration of the Guts, with a frequent voiding of Blood or purulent matter by Stool, pain and violent gripes, depending on abundance of sharp, corroding particles, that fret the Fibres of the Guts. It is a stinking nasty Disease, and very loathsome to rich people; besides, it highly endangers the Patients life, and not only infects all near it, but spreads its contagion over whole Provinces and Countries. Authors make several degrees of it. First, when slime with a little Blood and Pus come together. Secondly, when the inside of the Guts comes away, which we call the shavings of the Guts. Lastly, when the very substance of the Guts comes away. For sometimes *faeces* comes away without pain, which denotes a foul Ulcer. It so happens indeed in the Flux, which we call Hepatick, that Blood comes away without faeces, and without much gripes; but then the excrements are moist, like water wherein flesh has

been washed, and a man goes so often to stool. So also Blood often proceeds from the Haemorrhoids: all which things a prudent and experienced Physician can easily distinguish.

A Dysentery is either benign, or malignant, or epidemical. See *Medicines* of the Bloody Flux at London.

§. 2.

THe part which nourishes the snake in its bosom is, by the consent of all Authors, the Guts, both the small and the great. One may easily gather, that the Guts of both sorts are affected, from the running up and down of the stinking matter in their windings and turnings, which causes these sharp gripes. For successively the exterior coat is eroded, then the Arteries proceeding further eat the fleshy coat, and makes holes in the Guts; then comes blood, and sometimes with pituitous matter or *fumes*, and sometimes with bile, which is the reason why the excrements sometimes look yellow. And sometimes the Stomach itself is affected by consent, because of its proximity.

dare boldly affirm, upon experience, that both the small and large Guts are affected in this Disease. In opening of six Bodies, that died of Dysenteries, I found both small and large Guts full of purulent tubercles, which were black and sphacelated; and in one of them I found the *Pylorus* of the Stomach quite sphacelated and corroded; which Patient nevertheless was troubled with violent vomiting, and ended his days miserably in Convulsions. *Helmont's* opinion suits with this, who lays the blame in a Dysentery upon the *Pylorus*, because it expels out of the Stomach, and draws the cause of the Disease thither. We reckon also, that the glands of the Guts do suffer, and instead of laudable juice send out Blood.

§. 3. A Case.

A Boy thirteen years of age, addicted to eating of horary meat; in Autumn complained of gripes all along his *Colon*, but they lasted not long; yet after his pain presently went to stool, and voided slimy excrements with great streaks and fat swimming at the top, with a little Blood on the outside, whence I conjectured, the lower Guts were hurt. But within eight days (thanks be to GOD) he was cured by the Remedies, which will hereafter be mentioned.

§. 4. Diagnostick.

Now we will go to the Diagnostick, without more to do. People in Bloody Fluxes are forced at short intervals to void purulent excrements with gripes, a chilliness preceding, and heat fol-

lowing; and then the excrement^s are sometimes mixt with extravasated Blood. Sometimes there comes away purulent and bloody matter, sometimes pure Blood is voided, sometimes it is clotted and sometimes sharp; for I always observe there is an acrimony of Blood in the Patient, which preceeds this Disease (and thence we derive its malignity) which if it be Malignant, it shows other signs of Malignity; but it often appears to be one thing, and really is another. There preceeds, as I said before, a chillness, the common fore-runner of a Fever, which usually arose from sharp or pointed Particles, that were preexistent in the Blood, and caused that disturbance and vellication of the Nerves, then a continual heat ensues upon the enraging of these Sulphureo-Saline Particles, which not only exalt and disturb the mass of Blood, but put the very Spirits upon violent motion. Gripes do most torment, by reason of a violent corrosive, pertinaciously fixt in the fibres of the Guts, which spasmotick Convulsions are now and then continued from the pained Guts to other parts, that is, with a violent disturbance of the animal Spirits.

The remote cause therefore seems to be a salvage acid, pricking, cutting, and irritating the fibres of the Guts. There is also thirst, which here not only arises from the almost total evacuation of the *serum* by frequent stools, but from a sharp salt, which makes the Throat dry and parched. The Patient lies awake all night, because *serum* is wanting, and the sharp Particles, that is, those salvage Salts, not well according, do open and

and dilate the pores of the Brain. And by these same Particles the Nervous fibres of the Mouth of the Stomach are often vellicated; and therefore the Heart-burn is often a Symptom. Falling down of the Arse-gut, and a *teneismus* sometimes afflict People in this Disease, which undoubtedly arises from the prickings of those sharp Particles, which sollicit the fibres of the Guts to excretion. For the Guts being continually prickt and vellicated, are drawn together by virtue of the peristaltick motion, and thence arise divers inconveniences, which are frequent in a Dysentery. Sometimes Blood, sometimes bile, sometimes coagulated *serum* (which they call Phlegm) tinges the excrements, according as the humor or the morbid product is discharged in a greater or less quantity. Oftentimes the Patients feel an acute pain about the Navil, that passes like lightning through the Guts, especially the small ones, which are most Nervous. The pains that are above the Navil and in the Sides, signify that the larger Guts are affected. The rumbling and roaring of the Guts proceeds from a flatulent Gas, produced by an acid. If there be a Gangrene, the part is without pain, and then there is a snake in the grass. If there be an Ulcer in the small Guts, the pain is more acute, than if it were in the large. Sometimes there is restlessness, and that from a sharp intemperature: And then the pain is more acute and pricking.

§. 5. Cause.

ALl things being now premised, which are requisite to the

knowledge of the Disease, according to the nature of our design, remains, that we consider, what belongs to the *Ætiology*. The Ancients acknowledge an Ulcer of the Guts for the immediate cause, and for the remote, sharp purging Humors, bred in the Guts, and out of the larger Veins, from Spleen, Liver, Mesentery and other parts, which sollicit the expulsive faculty to frequent stools. They also blame Salt Phlegm, or yellow Choler, or black or acrid Choler. And they do not doubt but that this Disease also arises from gross crudities, sharp and bad humors, fruits, poysons and from violent purgers. In a word, they lay their Quaternity.

§. 6.

IN the opinion of the Chymists this Disease may be ascribed either to a dissolved Salt, which having acquired acrimony in the Guts, burns and corrodes them like a cret fire; or to a dissolved Tartar, and that fœculent and not moving running up and down the Guts, or in particular, according to *Sæcetan*, to arsenical, corrosive particles.

§. 7.

Helmont blames his Acid, otherwise the grateful Acidity of the Stomach, that angers the *Archæus*, who presently rises up, this strange energy lodged in the folds of the Guts, to expel them. For the *Pylorus* is in a rage; and then the angry *archæus* of the *Pylorus* disturbs the whole cœcum, and hence comes the Bloody, mucous and fibrous flux.

§. 8.

Willis suspects, that the more excellent juices, to wit, the nervous and nutritious, are carried to the solid parts of the body, and are despoiled of their temper in the bloody-flux, are as it were dried down and abound in the parts of blood, are carried by the black vessels towards the stomach and guts, and then ouze out by the mouths of the Arteries. And thus he blames the sharp Particles, not only obvious in the first ways, but the degenerate Particles also, which ought to be evacuated and are not, for want of transpiration, because the recrements of the degenerate blood are driven to the guts, and there make their way by opening the coeliac vessels, whence arises this pernicious and sometimes malignant and contagious disease. Of which see the Author himself on the London Dysentery.

§. 9.

Wilkins attributes the Cause of this Disease not only to sharp bile, and an acid pancreatick, by which he as well as others, thinks the guts are ulcerated and whence sometimes proceeds the plentiful excretion of blood, chiefly of Pus, but he says, generally this Disease arises from an acid humour, and not only from a corrupt and over sharp bile. For the lixivious Salt of the bile, being made very sharp, may indeed cause a gangreen, but seldom ever an Ulcer. Because, as he says, an Ulcer is an effect of an Acid, not of any thing lixivial.

Wherefore unless an acid and sharp humour be mixt with the bile, a Dysentery will never arise; but an acid and sharp humour alone, carried to the guts, may cause one.

§. 10.

Cartes pretends hooked, pointed and forked Particles, consisting of mere Cubes aptly and conveniently disposed and connexed, that looking this way and that way tear, divide and perforate the Membrane of the Guts, and so produce an Ulcer of the Guts, which Particles were preexistent in the Mass of Blood, and often are precipitated to the Guts.

§. 11.

WE in this Disease blame the sharp saline Particles of the Blood, namely the salvage Salts, which do not well accord, yea, the saline Dregs, that often stick in the first ways, which according to Cartes are pointed, to Willis sulphureo-saline, to the Ancients bilious, pituitous or serous Humors, or according to the Chymists mercurial and arsenical Particles, especially in a more malignant sort where Spots are observed, helleborine and colocynthiack Particles, which offend the Guts, vellicate and break their Fibres, and at length tear their Coat. For the Arteries and Veins are often so dilated and broken in their extremities by a precedent *orgasmus* of Blood, that they pour the Blood into the Guts. Without doubt a corrosive Acid predominates about the Guts in this Disease, whence that sordid Ulcer is produced: But

I opened two that died of this Disease, and found no Ulcer in their Bodies, but the *intestinum rectum* gangrened. For all Humors, saturated with this strange Acid, by their corroding Faculty penetrate the inner substance of the Guts, dilacerate and erode their Glands, bring forth Blood, and cause an intolerable pain in these orbicular, tensible Fibres, so that sometimes a Gangreen and at last death follows. This Disease therefore may easily be contagious by reason of malignant, arsenical, that is, corroding taints, which exhale, infect another Man's Mass of Blood, and so communicate this disposition to the Guts. For saline Particles may easily acquire a heterogeneous, malignant and eroding nature, which may impress such violent Tortures on the Guts, and so may infect the whole Body with this vicious taint, by benefit of Circulation. An epidemick Dysentery arises from an Air infected with subterraneous exhalations. The procatarick cause of a Dysentery is chiefly a bilious intemperature, and an infected Air.

§. 12. Prognostick.

IT is a dangerous and an acute Disease, and the Prognostick uncertain. A malignant Dysentery is worse than a benign one: for it has a Fever with it. In long Dysenteries loathing of ones Meat is bad, with a Fever worse, if little Lumps of flesh, as it were, be voided, it is mortal according to Hippocrates, *s. 4. aph. 26.* Raggy Excrements also are reckoned for a mortal Sign. And as Hippocrates says *2. pres. 23.* This Disease is worse for old Men and Children, than for middle aged Peo-

ple. He that voids pure Blood with continual and momentary Stools, Anxiety of Heart, Sweat, Watching and immobility, Thirst, is in a hopeless condition as I have observed several times. If the small Guts be exulcerated there is more danger; and they are more difficult to cure than the large; because they have more delicate, nervous Fibres, and more vessels, which pour out abundance of Blood, and cannot so easily be cured; yea such Ulcers are often mortal. Hippocrates also declares That a Dysentery from black Cancer is mortal. I have often observed Worms come up at the Mouth, and the greatest part of them died. If an Hiccough or Vomiting supervene, it is a bad Sign for it argues much sharpness, which causes Convulsions. If the Patients faint often, and they have a Hiccough, it is a very bad Sign. This Disease sometimes finishes its course in fourteen Days time, sometimes it lasts six Weeks, and sometimes that the Patients dy. A Dysentery which is attended with greater Symptoms, Heart-burn, Fever, loss of Appetite and Spots, threatens more danger. If sleep be wanting, it denotes an excessive sharpness in the Mass of Blood, so that the Acrimony reaches the Membranes of the Head, where it causes Watching by raising Vellations. If one lose his Senses, the Case is as bad: for it signifies an intense Fever.

§. 13. Dietetick Cure.

NOW we will hasten to the Cure. The Method for curing a Dysentery is this. First, there must be a course of Diet. The Air must

must neither be too hot nor too cold, but temperate. For an over hot Air sharpens the Bile which, according to *Sylvius*, consists of much lixivious Salt, a little Water, Oyl and Spirit) where the Blood is filled with these saline Prickles, and it makes its way thro the sanguiferous Vessels of the Guts. Sometimes impure and malignant Taints, consisting of a sharp, volatile Salt fly up and down the Air; whence this Disease often arises; and then it is called malignant or epidemical, especially where the saline Prickles are exalted to a higher degree, and rendered as it were arsenical, which must carefully be avoided. Cold also must be shunned; because it contracts the pyramidal papilla, that are in the Skin, and the numerous Excretories arising from the miliar Glands, which lying under the Skin, or interwoven with it, and then not only sensible Sweating, but insensible perspiration ceases. And when these excretory Tubes are obstructed, the Serum in the Body is dayly increased, and sharpened; which appears from the greater slipperiness of the Ecly, which comes upon the stoppage of these Excretory Passages. Therefore we must take great care, that in every Dysentery the Pores and Passages of the Skin be kept open as much as possible, and that the Body be continually disposed to a gentle Sweat, by which very thing these enormous coolnesses are not a little stopt; and if there be a Fever withal, it is also successfully cured by Sweating. The Air also in the Chamber must be purified, as in the Plague.

The Meat must be of good Juice and easy Digestion, such as Barly,

Pisani, Eggs, Rice, Oatmeal-Greuel, Broth of Mutton or Veal boyled with Endive, Purslain, &c. On the contrary forbear Meat, that is salt, raw or smock-dried, but especially horary Fruits, such as Plums, Apples, Pears not ripe, Grapes, Nuts of divers kinds, Pulse, Cucumbers, Melons, Pumpions, and things of the like nature. And here also all sweet sugared things must be excluded, which have concealed in them an Acid, and sharp Poison, which by fermenting do variously disturb the mixture of the Blood, and may easily cause this Disease. On the contrary, as we said before, all Meat that is temperate, and endued with a balsamick viscosity, is good, such as Rice, Barly, &c. The Drink must be Chalybeate. Yet we must take notice, That new Steel ought not to be taken for Astriktion, because it rather opens, but it must be often quenched before: for the oftner it is quenched, the more it binds. A Decoction also of Barly is good with shaved Harts-horn, Tormentil-root, and dried Quinces; or a Decoction of Mastich, Deer's Pizzle or a Bulls; or for some Patients an Emulsion of sweet Almonds made with Chalybeate Water; or red Wine diluted with some Decoction, but by all means avoid strong and generous Wine, Sack, Brandy, &c. for by the excessive use, or rather abuse of Wine, great and unusual Fermentations and Disturbances are produced in the Blood; and so the extremities of the Veins and Arteries are dilated and broken by the violent Motion and Turgescence of the Blood, whereupon the Blood flows in greater quantity into the Guts. Therefore here you

you must be careful, otherwise you kill your Patient.

Rest must here be advised to.

Sleep also, if it come not of it self, must be procured: for the Flux is further irritated by Motion and Watching, the Blood is made sharp, and the Exulcerations are exasperated; on the contrary by Rest and Sleep Fluxes are stoppt, Pains are eased, Strength is recruited; so that we may say with *Ætius*, *Sleep is the only relief for People in Dysenteries.*

Let the *Passions of the Mind* be moderate, for by the excess of them the Spirits are made violent, and by consequence the Blood is sharpened. We must therefore take care of Anger, for it sharpens and inrages the whole Mass of Blood. Keep the Mind as cheerful as may be, because by cheerfulness the Animal Spirits are carried pleasantly through the Nerves, which keep the Mass of Blood and other Humors in a gentle quiet frame. Physicians therefore do ill, who at their first coming denounce great danger to their Patients, which makes them sad and timorous, and this encreases their Disease, and hastens their death.

The *excreta* and *retenta* should be as they ought to be. The Excrements should not be various: For it argues, That the Humors part one from another, which is a bad Sign. The Patient also must have a care of his own Excrements. A little of *Digby's* sympathetick Powder may be strewed on them, or the Patient may go to Stool over the *caput mortuum* of Vitriol of Mars, which has a magnetick and an admirable virtue in curing a Dysentery, as *D. Michael* in the *Miscellanea curiosa*, relates.

§. 14. Pharmaceutic Cure.

These things being premised concerning the Diet in Disease, the next thing is to prescribe the Method, whereby it may be performed aright. I will therefore begin with the Ancients, whose Method of Cure is this following. In the beginning both they and the Moderns the Flux should not be stoppt; first of all they purge the Guts with such as temper the violence of the sharp Humors; last of all give astringent ones, and add Medicines as are proper to cicatrize. I have no more to give you any Receipts, because abundance of Books are full of them. They give Evacuators also by Mouth, such as Rhabarb, Turbiths, Myrobalans, Syrup of Marsh-mallows, or Cichory with Turbith; &c. After these they give astringents, to wit, Bleeding, Ligatures, Baths, &c. And they conclude the Cure with such as to stop the Flux, and strengthen the Stomach and Guts. And because there are above a hundred sorts of Astringents, we will not set down any; beside what are confirmed by experience, which any one may see hereafter, when we give our own Judgment. They order divers external things, they use Baggs of divers astringent Herbs and Roots to the Belly; they use divers astringent Liniments, fsters and Cataplasms; they use also to guard the Stomach, lest it may suffer by coldness, which may occasion the Disease.

ther would they have the Sym-
toms neglected. They therefore
ease pain by Anodynes, and when
these will do no good they fly to
Opiates, to wit, *Philonium Roma-*
nam, pilula de cynogliffa, requies Nico-
lai, and Treacle. They quench thirst
with Juleps made of sowre Juice of
Pomegranates, Currans, &c.

§. 15.

The Chymists have excellent
and approved Remedies in
this Disease; and they observe the
following Method; at first they
do not give Purgatives, but Dia-
phoreticks: for they think, That
in a Dysentery there is always
something poysonous. They there-
fore make a pestilential drink, they
give Treacle-water. After the
Poyson is expelled, they give some
comfortable binding thing, made
of *crocus Martis*, Coral, *terra sigil-*
lata, Bloodstone, Plantain, Shep-
herds-purse. But their highest
strengtheners they seek in Gold, *lau-*
danum perlatum, Oyl of Mars, Trea-
cle, Mummy. They prefer Tincture
of Coral and Emerald before all
others, nor do they contemn all
other Medicines that are taken from
Vitriol and Mars, such as *tartarum*
vitrioli anodynum, *tinctura Martis*,
albugens, *crocus Martis*, *panacea so-*
laris Wildegansii, and a thousand o-
ther things, which you may meet
with here and there.

§. 16.

Plinius commends the Blood
or Runnet of an Hare, which
appeases the rage of the *Archæus*,
also a Horses hoof, but not luxuri-
ous, otherwise it would do much
harm. He thinks also, That the

Yolks of two Eggs hard, or true
laudanum without *Opium* will still
the rage of the *Archæus*. He holds,
That these things likewise do ap-
pease its rage, Rhubarb, Quince-
Wine, Pomegranate-Wine, Chaly-
beate-Water with toasted Bread and
Nutmeg, Emulsions, Opiates, Cly-
sters of Chalybeate Milk, &c. Ex-
ternally he highly commends a
Weather's Cawl fried in Oyl of Ro-
ses and applied.

§. 17.

Allis his Method of Cure
is this following. At the
first he stops and moderates the
Flux a little by the following or
some such Medicine;

Take of Conserve of red Roses vi-
triolated two Ounces, *Venice*
Treacle one Ounce, Powder of
Root of Tormentil, *contrayerva*,
Pearl, Coral prepared each one
Drachm, Syrup of Roses what is
sufficient. Make a Confection.
Let the Patient take the quanti-
ty of a Chestnut every four or
five hours, drinking after it
three Ounces of the following Ju-
lep.

Take of Water of Mint, Bawm, Cin-
namon, Barly each four Ounces,
Treacle-Water two Ounces, Pearl
one Drachm, Sugar one Ounce.
Mix them.

Or he may take this follow-
ing;

Take of *Venice* Treacle one Drachm,
laudanum liquidum cydoniatum fif-
teen Grains. Make a Bolus to
be taken at the hour of rest,

Within

Within a day or two after let the Patient take a purging and binding Medicine;

Take of the best Rhubarb two Drachms, Citrine Myrobalans one Drachm and an half, red Saunders, Cinnamon each one Scruple. Make an Infusion for a Night in as much Plantain, and Barly-Cinnamon-Water, alike quantities, as shall be sufficient. Make a strong expression; to which add of Cinnamon-Water two Drachms and an half. Make a Potion.

Every Evening he gives a good Dose of *Laudanum opiatum*, and he never knew this Medicine hurt any Body in the Bloody-flux; either because the narcotick quality of the Medicine is conquered by the acid Juice of the Stomach, or because its Particles, that are transmitted to the Blood, are presently cast off again with the Bloody Stools, so that they cannot hurt the Brain, as he says, in his discourse upon the *London Dysentery*.

He also commends several Powders, made of astringent and strengthening things, compositions of which you may find in his Books. To cure the Gripes and Erosions of the Guts, he uses Clysters very frequently.

Take of the Decoction of *St. John's-wort* tops, with Sheeps-feet or Cawl eight Ounces, *Venice Treacle* two Drachms, Oyl of *St. John's-wort* half an Ounce. Mix them.

You may see more in his Treatise of the *London Dysentery*.

§. 18.

Sylvius thinks the cure of this Disease, consists in the evacuation and evacuation of the most cant Humors, cleansing of the Ulcer, healing of the Vessels and in binding the excessive Flux. Among Remedies, that temper a saline and acid Acrimony, magnifies volatil oily Salts, and temper an acid Acrimony, and reason of the Oyl dull the Acrimony of the Bile; for which he commends Emulsions, made of Seeds of Poppy, four greater Seeds, and some distilled Water. When the Acrimony is a little rected, he advises to purge by a small quantity, that is, by a Drachm or a Drachm of *Rhubarb*, to the end, that when evacuation is over, the Belly may be a little more bound. If the occasion, a little *mechoacan* or *lip*, may be given in form of a *lus* with a little *diascordium*, or infusion in Plantain-water, with *rup* of *Roses solutive*. Then Medicines will be proper which centre and soak up an Acid, as *Coral*, *Crab's-eyes*, *Chalk*. For the better consolidating of eroded Guts, and their Vessels, he advises *Dragon's-blood* and *Blas stone*. He absterges and heals eroded Guts with Clysters of *Milk*, *Venice Turpentine*, the Yolk of an Egg and Honey of *Ros* which he advises to be often given. To which end new Treacle, and the Author's *diascordium*, taken in a small quantity, are efficacious Medicines. Then for healing of the Ulcer he prefers *Balsam of Peru*, *balsamus sulphuris anisatus* or *fasciatus*, or *Turpentine*, before others.

are also in pertinacious and ur-
gent pains, he advises use of Opi-
um. And there are divers exter-
nals, both Liniments and Cata-
plassms made of Paregorick, Anodyne,
and other Astringent Medicines, which he
should not have neglected.

§. 19.

According to the Cartesian
Principles this Disease may
be cured by Medicines that
purge the sharp humors, and by
astringents. First of all therefore
one scruple of Rhubarb may
be given, and the use of it may
be continued for some time, for
gentle purging it binds mo-
mentarily. Emollients also, Lennitives,
and things that help fermentation,
may be used. To qualify the Hu-
mors, a Decoction of Barley is good,
a little Gum Tragacanth may
be added to the Decoction, or some
Arabick, or roasted Rhubarb.
The following Bolus may be of

Use of new Treacle one Drachm,
with which you may sometimes
mix of laudanum opiatum one
grain, and sometimes of Cam-
phire three Grains. Make a
Bolus.

Afterwards gentle Astringents
may be used, such as Marmelade
of Quinces, Conserve of Roses, &c.

Use of Conserve of Roses three
Ounces, diacydonium simplex
two Ounces, preserved Nutmeg
one Drachm, species diarrhodon
half a Drachm. With
Syrup of Coral what is sufficient,
make an Electuary Of which
you may often take the quantity
of a Nutmeg.

Coral is also good here, because
it restores the fermentation of the
Blood. Among Externals divers
Emollients and Astringents may
be made use of, which we shall abun-
dantly mention hereafter.

§. 20.

WE encounter this tyrant
with a purging Medicine,
unless the Enemy make his ap-
proaches privately and cunningly,
for then we rather chuse to give
Sudorificks and Alexipharmacks.
In the beginning of this Disease,
we should, in my Opinion, dili-
gently observe, That we bind not
too much, before the sharp Parti-
cles, that are mixt with the Hu-
mors, be evacuated, and well tem-
pered; otherwise you will but try
in vain to bind. For Astringents
will not then do the business, but
Nature will sufficiently bind, when
she is rid of the sharp Matter, be-
cause what is heterogeneous ought
to be evacuated, otherwise the Pa-
tient will relapse. Therefore ab-
out half a Drachm of Rhubarb
may be often given in a solid form
(which after gentle purging binds
a little) or if there be occasion,
and there be a great quantity of Se-
rum, I usually give, to good advan-
tage, a little mechoacan or Powder
of Jalap. In Children a little Sy-
rup of Cichory with Rhubarb and
Cinnamon-Water will be good. An
abstergent Clyster may be also gi-
ven of a Decoction of Barley with
Seeds of Plantain at the first, and
Conserve of Roses with the Yolk
of an Egg; the next day we give
Syrup of Roses with Rhubarb, ad-
ding half a Scruple, or a Scruple
of Rhubarb in Plantain Water.

E e

Qua

Our Shops have the following Powder;

Take of Rhubarb moderately toasted six Drachms, Mechoacan, *Chebuli* Myrobalans toasted each half an Ounce, Nutmeg four Scruples, Mace two Scruples. Mix them. Make a Powder. The Dose one Drachm.

When the Enemy is repulsed, we proceed to moderate Astringents and Mitigaters; among which these excel, divers Oplates, terreous, subacid, testaceous, chalybeate and glutinous Medicines. I have a mind, for the sake of young Physicians, to set down some Compositions of these Medicines. By which Medicines (I can say it without boasting) I have often put the Enemy to flight; especially by this one I cured above an hundred, when the Plague was epidemick, to wit, Oyl of sweet Almonds drawn without fire, mixt with Juice of Citron, and taken often in a day; continued for several days, but first giving toasted Rhubarb.

Among Electuaries I have often used this following, with good success;

Take of old Conserve of Roses two Ounces, *Venice Treacle* one Ounce, *diacydonium simplex* one Ounce and an half, *species diarrhodon Abbatis* half a Drachm. With a sufficient quantity of Syrup of Citron make it into an Electuary.

Or an Emulsion may be made of a Decoction of Plantain Seeds in Barly-Water, sweet Almonds, and the four greater cold Seeds.

Others spread Oyntment of Ro-

ses on toasted Bread, and upon it of Powder of Mint, Mastich, red Roses each a Scruple, Camphore three

Some commend Cryfal self, because a certain Matter flows through it which restores the Ferment the Blood.

Some like the *lapis benzentalis*. Others are for half ple of Extract of Coral in Rain-Water. The following sion often attained the desired

Take of the four greater cold each two Drachms, white py three Drachms, *Plantain* Drachm, sweet Almonds Drachm. With Water of juice, Leaves of Oak, each two Ounces, make a sion. Add to it of *terra* half a Drachm, *Camphore* Water one Ounce, *Martis* Quinces half an Ounce for several times.

For stronger Astringen (nevertheless we must have of) *crocus Martis astringens* or the *caput mortuum* of a stone, or any sealed Earth, it contains something of in it, whereby it opens gently: this will be good there is any malignity. *Martis* and prepared good; for they temper the astringen, and also open.

To heal and mitigate, following or some such Clyster be given;

Take of Flowers of St. Pomegranate Flowers, Sanicle, Plantain, *Camphore* one handful, Root of *Rubra*

Ounce. Boyl them in a sufficient quantity of Chalybeate Milk or Water, adding some Goat's Suet. Or if you have a mind to glutinate more;

Take a Decoction of a Sheep's-head and feet, Venice Turpentine dissolved in the White of an Egg and Balsam of Peru.

And if the Pains be very urgent, one Grain or two of *laudanum opiatum* may be put into Clysters, but we must never go higher. I remember an example of one, who had a Clyster given him by an Apothecary, in which a Scruple of *Opium* was dissolved. Upon which the Patient died presently of an Apoplexy. Nor are Oyls good in Clysters, because they contain much acid in them; or saline things. But a drop of *balsamus sulcatris turrisatus*, or *anisatus* may very well be added to a Clyster. Yet Sodorificks must always be given between whites, and Bezoardicks and camphorated Medicines: I never suspect something of malignity in this Disease. Among which *tinctura simplex*, *camphorata*, &c. are excellent. Now by Bezoardicks the strength of the malignity is broken, the Blood is restored to its perfection, the Acrimony of the Humors is soaked up and corrected, also every foreign humor is driven out by insensible transpiration, the Fever it self and the Contagion is taken away by the root, and at length wholly extirpated, and in a word, the whole Kingdom is restored to its primitive liberty. If therefore the Patient after he has gone often to stool find any relief, we must insist only on Alexipharmacks: for

Instance, *pulvis bezoarticus pretiosus*, *Pannonicus ruber cordialis*, *pulvis bezoardicus wedelii*, *Hoffmanni*, *tinctura bezoartica* mixt with anodyne Essence, are found by good Experience to be excellent. For so the malignant Taints are dissolved, and the Acrimony of the Humors is taken off.

In Dysenteries without pain we must have a care how we use Opiates. For in this case Bezoarticks must needs be better; as I observed by sad experience in Mr. B. a Councillor of *Nassau*, who upon drinking the Waters at *Swalback*, fell into an indolent Dysentery, and took of an Apothecary upon whom he relied much, a certain mixture, it may be with too great a Dose of *laudanum opiatum* mixt with it, and so the next day he slept his last. See *an. 2. ephem. German.* And the saying is in this case true, that it is worse to have no sense of pain, than to be in pain. Consult in this case *Minadous* a Doctor of *Padua*, who observed that all Dysentericks, who by the advice of their Physician took *Opium*, died for it. *Hoffmannus* gives a reason, *de usu & abusu medicamentorum chymicorum* p. 30. because the Ulcers of the Guts are made more putrid and foul by the *Opium*. But, to confess the truth, we, as well as *Willis* and *Wedelius* (who tells how he cured above five hundred People with Opiates, *Opiolog.* p. 122.) make bold to affirm, That scarce any true Dysentery can be conveniently cured without Opiates, and that the labor is lost in Astringents; but they ought to be mixt with volatile Bezoardicks in the beginning, or rather in the middle, and with more fixt ones in the end. If any one desire authority, let him read

Bassius in his Notes upon the fourth Chapter of *Garzias ab horto*. *Horstii consil. dysenter. t. 3.* The illustrious *Boyl* uses to give Rhubarb with a Grain of *Laudanum*, and then a Milk Clyster. *Burrhus* in a letter to *Bartholine* testifies, That there is not a more present Remedy for dysenterick People than Rose-water, wherein Gold has been several times quenched. When we must bind, the famous styptick Liquor exceeds all, which is made, not of Vitriol, as some have been falsely perswaded, but of a Martial earth impregnated with a magnetick Water, as the excellent *D. Waldsmidius* knew very well in *Fundament. Medicin. ad mentem neotericorum delineat.* Here follows a styptick dysenterick Powder;

Take of *panis sambucinus*, Root of Tormentil each two Ounces, Bole Armenick, *terra sigillata*, Emerald prepared each half an Ounce, Nutmeg two Drachms, Harts horn prepared without fire three Drachms. Mix them. Make a subtil Powder.

Mabius advises to this dysenterick Powder;

Take of Powder of Blood-stone one Ounce, burnt Harts-horn, *crocus Martis* each half an Ounce, Magistery of Coral made with Citron Juice one Drachm, *medulla lapidis* one Drachm and an half. Mix them. Make a Powder. The Dose one Scruple.

If there be malignity, he adds the slough of Snakes. I should advise Spirit of *terra sigillata* mixt with other Medicines. Tincture al-

so of *Catechu* and its terra will do good.

External Topicks designed for the Gripes, and Paregoricks are also their use. Abundance of them are commended by Authors. I shall here give you the most famous and approved. And *Kaflerus* commends Venice Treacle half an Ounce and Vitriol of Mars applied to the Navil. *Crollius* and *Agricola* commend *terra sigillata*. We put *chloris* or *laudanum opium* to the Navil. Some use this following;

Take of Bread roasted, beat it with Vinegar of Rosis it is sufficient; foment the belly.

Brunnerus in *consiliis* commends externally a Crumb of the Crumb of Bread and Tormentil Roots boyled in White Vinegar to the consistency of Pultes. Also our balsamick mixture of Choclate, &c. applied to the Stomach will do good, because it often suffers by constriction.

Borellus magnifies Goebe applied to the Soles of the feet. A Plaster of Bole, which has any thing Martial in it, applied over the Belly, is very efficacious. The Cawl of a Sheep or a Goat applied to the Belly while it is warm will ease the Gripes. And *Prince Rupert* his Unguent Toad-flax and Oyl of Balsamum is good, if the Back be anointed with it. Bags of porrick Herbs, and other things as there is occasion, may be applied to the Belly.

If a *tenesmus* be troublesome, sides *Myrsich's* fumigation

Op-mullein, Wedelius his approv-
Powder made of burnt Harts-
ra, Mastich subtilly powder-
ed, will do good: And there
is an Unguent, which can never
be sufficiently commended, made
of fresh Butter with fine Powder
of *lapis scissilis*, with which part of

the *intestinum rectum* may be anoint-
ed, whereupon the Acrimony and
Pain presently cease. The *intesti-
num rectum* may be fomented al-
so with warm Milk. And Prayers,
the best of Medicines, must fre-
quently be used.

E e3

CHAP.

C H A P. VI.

Of the Iliack Passion, or Twisting of the Guts.

§. I.

THIS Disease is called *Iliack* or *εἰλεός*, either from the Part affected, that is, the Gut called *Ileon*, or from its Symptom, *ὑπὸ τῆς εἰλεῖν*, from turning or twisting, because it is believed, That in this Disease the Guts are twisted. It is also called *Chordassus*, which signifies the stretching of a Chord, from the likeness of it; for if you lay your hand to the Belly, you would think you felt a tight Chord. Some call it *volvulus* or *convulvulus* from the twisting of the Guts. Some call it a *Vomiting of the Ordure*. Others name it a *Disease of the small Guts*. Some account it a *sharp Torment, an excess of the Colick*. The followers of the barbarous Physicians, and the Vulgar call it *Miserere mei*, by reason of its violent and most exquisite pain, and because it is a Disease that deserves commiseration; so that they who are afflicted with it, may well cry *miserere mei*.

Description.

This Disease is defined to be, a most bitter pain of the small Guts, with a pertinacious Obstruction of

the Belly, and a troublesome Retention of the Ordure by Vomiting, rising not only from the stricture of the Guts; but also from the Convulsion. Where *Brassavola* says well, that for two and twenty years of his Practice, he never met with the Iliack Passion without Vomiting.

Division.

The Colick pain is distinguished from the Iliack Passion, because the Colick the large Guts, but in this the small are affected. We reckon that this Disease may be bred, as well in the large as in the small Guts, because there may be a Convulsion in all of them, so the peristaltick Motion may be inverted. For Nature has endued these Parts with various windings and turnings, and hath furnished out a peculiar peristaltick Motion for the Guts, whereby, that which otherwise could ly still, is by the help of Animal Spirits, flowing to the Fibres of the Guts, put inwards; and what is unprofitable, expelled; which Motion is made by means of the Fibres (and every Coat has abundance of them) which one may behold with the

eyes in the Belly of any Creature opened alive; and I have often beheld these Motions with delight, like Snails creeping on the ground. The Guts therefore seem to have a kind of waving Motion, like that of Serpents, Worms and other creeping things; yea, oftentimes, when I have cut open Creatures alive, I have seen the Guts strain with a waving Motion, and drive the Chyle and Excrements downwards, as if they had been stript through a narrow ring. The like Motion also is ascribed to the Wombs and *scrota* of Animals; but especially to their Stomach, by Thomas Cornelius Consentinus prom. 6. de nutritione p. m. 234. in these Words: *One may observe the like Motion also in the wombs and scrota of Animals; but this Motion appears no where more than in the Stomach, which though outwardly it be obscure, yet in the inside, it is not only rationally concluded on, but one may behold it with ones Eyes. For upon cutting open the Stomach of a Creature quickly, a frequent and various Motion is perceived. And the reason of this tremulous Motion, is, because there are Animal Spirits still in the Fibres, and then they betake themselves to flight, wherefore this tremulous Motion remains still; which one may observe also in the Heads of Oxen or other Beasts, that are new killed, where the inner Fibres of the Neck are a while in Motion, which I also saw in a Man, who was beheaded. These things I was willing to premise, as worth the knowing. That the cause of this Disease might better appear, of which we shall treat designedly hereafter. Now Practitioners take notice of three sorts of Black Passions. One is Stercoral, which has its rise from the Ordure and Superfluities of Meat, which*

should be voided by Stool. Another is Humoral, which is caused by a thick, viscid Humor, fixt in the Guts, or by a sharp and corroding one. Another is Flatulent, which arises from Wind pent up, which seeks a Passage by violence. All which things the following case will in some measure declare.

§. 2. A Case.

While I was Physician to the Princess of Nassaw, Daughter of the Prince of Orange, I met in my Practice with a Noble Maid, N. P. who had been for several Months troubled with Costiveness, a *teneismus* and Fits of the Mother, without doubt, through Grief for the death of her betrothed Husband, who was slain in the Wars, who thereupon grew Melancholick, so that she went not at all to Stool, she had a dull tenseive pain in her *abdomen* and *hypochondria*, and her trouble was such, and the distension of the *abdomen* so great, that for very pain she could not rest in her Bed. There succeeded loathing and enormous Vomiting, at first indeed of what she took, afterwards of divers things contained in her Stomach and Guts, especially a viscid and tough Humor, and last of all, of putrid and corrupt Chyle, quickly attended with Swoonings and Convulsions. Yet (praise be to God) the Patient was restored to her Health by the Medicines hereafter mentioned far sooner than was expected.

§. 3. Part affected.

The Part affected therefore is by the consent of all Authors, reckoned to be the *Ileum*, that small Gut, which as it is the last among the Guts, so it is the longest,

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twenty hand-breadths in length, and but about an inch wide : wherefore it is narrower than the rest, and for that reason, they say, it is the more apt to be inflamed, following *Galen's* reasoning l. 3. *de facult. natur.* If one vomit Ordure (says he) you have a most certain Sign, that the small Guts are affected. We, as was said before, do take the large, as well as the small Guts for the Part affected : the reason is, because the thick, as well as the small, are capable of a peristaltick and convulsive Motion, yet so, as that in this Disease the *duodenum* is very rarely affected, the *jejunum* seldom, the *Ileon* most frequently. But I am perswaded the large Guts are seldom affected ; for I have observed the Iliack Passion twice from an Inflammation of the *Colon*, which *willis* also observed. There is one wonderful thing that I have observed ; a Woman in a Village of *Hannover*, call'd *Mittelbuchen*, has had an Ulcer in her large Gut for three Months and upwards, which slipped out of her Belly into her Groin. It is eaten and looks black, the Excrements are stinking, without Vomiting, or any other Ail ; she is yet living miserably, and is in the hands of a very skillful Surgeon, call'd *Wedling*.

§. 4.

PRactitioners mentions abundance of Signs, which declare the Iliack Passion, the chief of which, and the most necessary to be known, I shall here set down. They are bound in their Bellies, and we hear them always complaining of Costiveness, so that though they strain never so much to go to Stool, they cannot force any Ex-

crements out. Which *Galen* confirms, when he says, In the Iliack Passion nothing goes downward. *Hippocrates* knew of old, That costiveness was an inseparable property of this Disease, where he says, when the twisting of the Guts takes any Man, the Belly grows hard, and nothing passes downward. There are also great Belchings and Rumbles of the Guts, at first they find pain at their Stomach, Reaching and Loathing and Heart-burn. What torments them, and stretches the Belly ; and there is rarely an Iliack Passion found, which is without Wind, as experience testifies. When the Disease encreases, the Pain is exquisite and intolerable, and the Patients feel a firm and permanent Pain in one or more places, and that either very heavy, or tensive, or burning and throbbing. Sometimes there is a notable Tumor in this at that place of the Belly, which one may even feel with ones hand. In the progress of the Disease there are enormous Vomiting, and such, as not only bring up the Meat and Drinks and Humors very various in regard of their Causes ; but the Chyle and sometimes the very Excrements, death quickly ensuing upon a precedent Swooning. *Solennander* confirms 16. l. 5. testifies, That Clysters have been vomited, and Suppositories also ; a wonderful instance whereof *Sennertus* gives *Medic. pract. l. 3. part. 3. §. 2. c. 1.* Upon which most grievous Symptoms there comes another of the worst portent, the Hiccough. Tossing and tumbling, want of sleep, sickness at the Heart, Thirst, a Fever, Fainting, coldness of the extreme Parts, Convulsions and oftentimes a miserable death attend this Disease.

this suffice for the Diagnostick. *But* he desires to know more, let him consult Practitioners.

§. 5. Cause.

A Understanding Physician will go about to deny, That the Generation of Causes is very requisite for the true Method of curing Diseases. But oftentimes how scrupulous of the Causes Practitioners to their great disadvantage do experience. Wherefore, according to our proposed Method, will first consult the Ancients about the cause of this Disease, who say it proceeds either from an Ailment, or an Inflammation, or an Obstruction of the Guts, which they say may proceed either from dried Excrement, or an Humor, or Wind. And this Disease, according to them, is generally constituted from a continual corruption and crudity of Aliment, for the most part from fat flesh, which has been corrupted, also from unseasonable eating of Mushromes, Shell-fishes, Beans, Pease, Medlars, Services and other poysonous and corrupt meats. It may come from excessive drinking of Water that is preternaturally cold, especially if one sweats in a Sweat. They doubt not, That this Disease may proceed from Worms. And among other causes they reckon the abuse of several Non-natural things.

§. 6.

The Paracelsian Chymists say, That the Colick and Iliack Passion are the same Disease, and that it lies between the Stomach and the blind Gut. And Paracel-

sus himself derives the Matter from a sharp Matter dissolved in the Guts by a pontick Salt; which Matter by its innate pontick stypticity contracts the Guts and twists them. For a styptick Nature closes the blind Gut, and all the Guts, and turns the Excrements sower and into Wind, and so hurts them by running to and fro.

§. 7.

H Elmont thinks not that the twisting of the Guts is a twisting and apogum of the small Gut, because it is repugnant to Anatomy, which shows, That that Gut is cloathed with the Mesentery, for its outer cloathing, and by the Mesentery is tied to the Loins. For, says he, if the Gut were twisted, besides its usual turnings, what should be the mover, with the twister? He therefore thinks, That the *Ileum* can only be obstructed by the internal Excrement, because that, and nothing else can do it; and so he says, the Gut *Ileon* (in which otherwise the Excrements use not to be hardened) is stoppt up by unusual Excrement. He therefore constantly maintains, That this Gut can never be twisted nor loosened out of its case, the Mesentery. Yet he acknowledges that Wind may cause this Obstruction; because in all that died of the Iliack Passion, he ever observed the Gut *Ileum* to be full of Wind. He also relates an Example, *l. de flatibus p. m. 251.* of Thomas Balbani of Antwerp, who offered the Physicians fourscore thousand Flanders Pounds for a Cure; and whereas they blamed the twisting of the Guts, as if they had been tied in a Gordian knot, and held him for incurable;

curable; he died indeed of the Disease, but when they opened his Body, they found nothing but a little hard Excrement in the small Gut sixteen inches above the blind Gut, and a great deal of liquid Excrement in the *Ileum* above it.

§. 8.

Allis in this sad Disease thinks, That the carnos Fibres of the Gut are hurt by an Inflammation or Gangreen of the small or large Gut (as he observed it in the *Colon*) because in opening of several, who died of the Iliack Passion, he always observed that an Inflammation or Gangrene was almost in all the cause of their Disease and Death. Whereupon the Excrements restagnating towards the *Ileum*, do generally cause an incurable Iliack Passion. For, according to him, Contractions are caused, inasmuch as the Animal Spirits start out of the tendinous Rimb of the Mesentery into the carnos annulary Fibres, and out of the tendinous Fibres of the cutmost Coat into the carnos longitudinal Fibres, both which they do so puff up and tumefy, that of necessity they must be shortened and contracted. For in a tender and very sensible Membrane, the Animal Spirits may raise continual and cruel Spasms and painful Corrugations, so that the peristaltick Motion of the Gut affected, whereby the Excrements of the Belly are forced downwards toward the *anus*, may be hindred, and quite inverted thereby.

§. 9.

Sylvius does constantly maintain, That in this Disease Motion of the small Gut is inverted, with a vomiting of the dure ensuing. Because in opening those, that died of this sease, he found the cause to be Gangreen of the small Gut, and great a Corrugation and stricture of the corrupted Gut attending that all passage of the Excrement downwards was stoppt, yea, and they were forced to a remounting upwards, and so to a miserable charge by Vomiting. Another he thinks to be the slipping of the lower part of the Gut into the upper, or of the upper Part into the lower, and indeed by Wind forced into the Gut thither. But that they are tied on a knot, or caught, some Practitioners hold, he denies, and gives some reason, he does so.

§. 10.

And so the Cartellans of the twisting of the Gut think that one Gut cannot be knit to another, because they think that one Gut cannot be knit to the Mesentery, and they think, That the Iliack Passion arises from sharp Humors within the Membranes of the Gut, whereupon their expulsiory Motion is often inverted, because the Animal Spirits being excited by this irritation, flow into the cutmost Coarcted Fibres of the Guts, by an inverted Influx the Contractions are only forced upwards. They think That this Irritation happens in this Disease, either from an Inflammation of the Guts, or from the

Obstruction by hard Excrements, or
their Compression in a Rup-

§. II.

judge, That in this case there is not only a straitning or a contraction of the Guts. therefore we may well doubt, whether this Disease can have its rise only from the hardened Excrements, but sharpness, because a Gut will bend strangely. Wherefore we think the cause of the Obstruction is the Belly, of vomiting the Viscera, and sometimes the Excrements, and of the violence of the Symptoms of the Iliack Passion, to be generally an Inflammation of the Gut *Ileum*, which is the Animal Spirits: For when they are too weak for this Motion, they cause a convulsive Motion, and by their *orgasmus* or rage these render orbicular Fibres, do not only straiten them and invert the peristaltick Motion, by rendering them, cause most cruel pain. and sometimes a straitning of the Gut by the Humors continued against the Coats, when the Excrements, especially if they be hard, cannot pass, may be the cause of this Disease. For the Guts so affected by the Animal Spirits are compressed after an unusual manner, and are vellicated and constricted by the Humors lodged between the Membranes of the Guts, that make sharp. For in some the inner Coat of the Colon is so tender and sensible, that upon taking Opium, though it be anodyne, the Spirits are immediately irragitated, and being exploded among the nervous Fibres, puff up and distend the Membranes, and so create great

trouble all over the Belly. No wonder therefore, if partly through the Convulsion, partly through the stoppage of the Gut by hard Excrement, nothing can pass downward, and whatever is taken, and sometimes the very Excrements, are brought up. Which Excrements use to ascend, not out of the large Guts (because the Valves hinder the ascent of the Excrements) but out of the small Guts.

If therefore this Disease arise from an Inflammation, then there is an acute Fever; but if from Wind or any other Obstruction, then no Fever attends it: The pains from Wind are not so fixt, but that they may easily be dissipated. We believe also, That sometimes the Juice in these Glands of the Guts does so degenerate from its own nature, that it turns austere and pontick; whereupon the Guts are most closely straitned, from which straitning we do not question, but this Disease may often arise. Which opinion of ours the opening of three Persons, who died of this Disease, does confirm, in whose Bodies nothing could be found but a little straitness of this Gut; and since the Ureters and Neck of the Bladder may be so straitned by an austere Salt alone, why not the Guts? The antecedent Causes, are all such as can produce this Disease, in this case especially a Wind-Colick can do much. Worms entangled in Phlegm, stoppage of the Guts by Caruncles growing to them, or by pressure of the Guts in Ruptures either in the Groin, Navil or *Scrotum*, an Inflammation following. Finally the procatartick cause is the abuse of divers non-natural things; of which we shall speak in the Dietetick Cure.

§. 12.

AS to the Prognostick, this is a most horrible and dangerous Disease, and usually incurable. Hither these following Aphorisms of Hippocrates do relate, *f. 3. aph. 2. and f. 6. aph. 24.* They that have the twisting of Guts upon the Strangury, dy within seven days, unless upon the coming of a Fever abundance of urine come away. And *f. 7. aph. 10.* After twisting of the Guts, vomiting, or Convulsion, or Delirium, is bad. If they, that are troubled with twisting of the Guts, grow deaf in Vomiting, according to *Coac. 72.* and become dumb, it is a sign that heat is almost dead in such. If Wind in the twisting of the Guts come away by a Fart, and stink much; according to *Forestus observ. 17.* it is bad. If the Belly be so strait, that it will not admit a Probe, it is fatal: for by consequent the Excrements must of necessity be voided by Vomiting. Therefore *Arculanus* does not amiss in calling the death of ileous Persons cruel and nasty. To vomit Chyle, bilious, ill-scented, particoloured and black Stuff, according to *aph. 24. f. 4.* is a bad Sign. *Galen* confesses, That to vomit Ordure, is a fatal Sign. If Stink or Worms come up at the Mouth, it is fatal. If iliack Persons be in a cold Sweat, death is in the pot, as *Sebizius* says. A twisting of the Guts from an Inflammation, is desperate.

Every acute pain coming upon old Men, according to *Archigenes* his judgment in *Attius*, uses to cause death. *Hippocrates L. 3. de morb.* says it ends in death, if a Fever, or Looseness of the Belly supervene: And *Rosinus* confirms it, who obser-

ved, that a Noble man of old died of it, who had a looseness after great costiveness. It proceeds only from Obstruction by Wind and Excrements, and some hope of recovery. It is cured and judged by a flux of urine according to *Hippocrates f. 4. aph. 44.* Now follows the Cure, and the Dieterick.

§. 13. *Dietetick Cure.*

THe method of Diet consists in the moderation of the food, and natural things, which must be used according to the variety of the cause from whence the Disease arises. If therefore it arise from Inflammation, chuse a cold Diet, the Patient sleep towards the left side. If it be not such by nature, it must be procured by Art, that the Floor must be strewed with flowers of Roses, Poppy, Water, &c. If the Disease arise from Obstruction of the hardned Excrements, chuse a moist Air, and avoid one that is dry and too hot.

As to *Meat and Drink*, the Patient must be sparing: for in all Diseases of the Guts admit of little Diet, so we reckon it proper in this especially. For the main part the Cure depends on abstinence. If it be an Inflammation the Victuals must be cooling; when the Excrements are hardned, it must be soft. Above all things avoid cold, flatulent, salt and fat things, which may encrease the Inflammation. Barly-Cream, Chicken-broth, &c. are good. For the ordinary Cure we recommend a Decoction of Horse-dung, that is, if the Disease proceed from hardned Excrements without Inflammation, because it expels Excrements.

delicate divers Juleps, Elixirs, &c. may be made. Motion and Rest must here be moderated according to the variety of the Cause. In an Inflammation of the Guts Sleep is advisable, but in an Obstruction moderate waking will be ordered. Diet also and Rest vary. In an Inflammation and Rupture, Rest is best; in a violent Obstruction, Motion will be more proper. Let the Passions of the Mind keep their due Moderation; let the Mind, as far as Reason will permit, be cheerful. Require also that the Belly be kept open, that the Urine, Hæmorrhoids and Menfes pass freely. Hitherto the Dieterick Cure, now for the most part Pharmaceutick.

§. 14.

Practitioners vary in their Cure according to the Cause. If the Disease proceeded from hardened Excrement, or from gross and viscid Humors, they prescribed divers Elixirs and Laxatives both internal and external, as emollient Clysters; externally they applied distillations, Unguents and Fomentations. They laid the Cawl of a flannel heated in warm-water to the Belly, and they neglected not the use of emollient things, even of Olive alone. They also gave internally Oyl of sweet Almonds alone, mixed with Broth or with White-wine. When these things would do no good, they proceeded to more violent Medicines, and those very ones. If they suspected the Disease came from Inflammation, they resorted to Blood-letting, or in some Cases to emollient and cooling Medicines. Many of them mightily

value bathing in fresh Water. When pain was very violent, they used Opium. If the Disease came from a Rupture, their main end in cure was, to put up the Guts again into their place by the hand of a skillful Surgeon: but first they must be fomented with some emollient Decoction or Cataplasm of emollient Herbs and Flowers, yet always promising emollient, anodyne, oily and slippery Clysters. One may have Receipts enough out of Authors, if one be minded to learn out of their Writings. Since generally the main stress of the Cure lies in removing Obstructions, they commend the following purging Decoction;

Take of Leaves of Penny-royal, Bay-leaf each half an handful, Roots of Peony, Lovage, Fenil each half an Ounce, Leaves of Senna two Drachms, Mechoacan three Drachms, Seed of Anise, Serpentina each one Drachm. Boil them in Flesh-broth what is sufficient, till a Pint be left. Add to the Colature of Symplicum de dabus or quinque radicibus, what is sufficient for a grateful taste. Give it at several Doses.

§. 15.

THE Paracelsian Chymists, and their chief, Paracelsus c. 6. tr. 1. l. 2. de Tartaro, rejects the use of Clysters in this Disease and calls them a most vile, absurd and filthy sort of Medicine, since the cause of this Disease is often but one drop of pungent Tartar, sticking in such a part of the Guts as Clysters cannot reach, though he does not deny, but they may sometimes assuage pain by their unctuousity. He also forbids Purgers, and orders, That

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That the Cure be directed to that styprick and pontick thing, which causes Pain and Convulsion, that is, to correct the dissolved Tartar. To which end he advises Oyls and fat things, which obtund both the styprick thing and corrosive Poysons. He commends Oyl of Bays in Clysters; but he says, the most effectual Medicine is the Grease of a Badger, Fox, Ape, Cat, or a red Dog. Externally he commends a *Galbanum* Plaster, or one of Snakes. Inwardly also he gives (as is usual with him) Liquors of Gold and Mummy, in which he asserts the virtue and cure of contracture reside. His Disciples and Followers highly commend Spirit of Salt and of Nitre in the Iliack Passon. They wonderfully cry up Spirit of Turpentine and several other things, concerning which the Chymists themselves may be consulted.

§. 16.

Helmont commends the swallowing of Musket Bullets in drink (the more and the larger, the better) which only by their weight drive forward the hardened Excrement: but they ought to be swallowed as the Patient stands or walks. He advises several other things, which are mentioned here and there in his Writings, and shall be hereafter mentioned in the Collick.

§. 17.

Allis, for correcting the Acrimony of the Humors, which raises an Inflammation of the Guts, and enrages the Spirits, above all things commends this of *Riverius*;

Take of Salt of Worms
Scruple. Give it in
of Juice of Lemon.

Take of prepared Calomel
Drachms, Salt of Worms
Drachm and an half, Ju-
mons four Ounces. Let them
in a large Glass. Add of
mon Water two Ounces.
Dose, a spoonful or two
thrice a day.

But because the Author
where professedly treat of
sease, we are loath to be
and will proceed to another

§. 18.

Sylvius in this Disease
commends fat Broth,
drunk in at the Mouth, and
by way of Clyster for the
ing any Acrimony of Humors
stopping the irritation of
to which he prescribes the
ing Clyster;

Take of Root of Marsh-mallows
Ounce, Leaves of the same
low, Tap-mullein each two
fuls, Seeds of Fenugreek
each one Ounce and an half
them in pure Water. Take
Ounces of the Colature
Oyl of white Lilies one
fresh Butter half an Ounce
them. Make a Clyster.

He also commends the use
of Fomentations, made of the
Ingredients, to the Fundament
Belly.

He praises Anodynes and
ticks to stop that same irritation
to temper the sharp Humors
instance;

French-Barly boyled till it
one Ounce and an half,
Almonds, white Poppy-
each three Drachms. With
Ounces of Barly-Water
an Emulsion. Add of dia-
half an Ounce, of Fe-
Water two Ounces. Mix

At short Intervals also let the Pa-
take a few Spoonfuls of the
mixture ;

of Water of Plantain two
Fenil one Ounce, conse-
hyacintho, alhermes each
a Drachm, Laudanum Opi-
three Grains, Syrup of
Poppy one Ounce. Mix

If a Gangreen be already
and if the upper part of the
into the lower, then
Author reckons the Disease for
curable. But if the lower part be
into the upper, then he que-
not but that sometimes it may
by swallowing of golden
Bullets, with O. I of sweet
or Olives, or an Ounce or
of crude Mercury. Nor does
divers Externals both Li-
Cataplasms, and other A-

§. 19.

his Followers order
blood-letting. If the stoppage
from Inflammation, then
administer Clysters of lenitive
things, that so they
temper the sharp Humors, and
the ways slippery. For the
and they prescribe leni-
Purgers. They advise

also crude Mercury mixt with
the Yolk of an Egg, that it may
not stick to the Guts. They also ad-
mit of Narcoticks, to assuage pain;
for they correct the Acrimony of
the Humors, and stop Convulsions
of the Guts. They likewise com-
mend divers external Emolli-
ents.

§. 20.

Our Method of Cure consists
not only in restoring the
Contrary and inverted Motion of
the Stomach and Gut, but also in
freeing the Guts from that austere
and morbid product, which strai-
tens the Guts too much, and raises
Convulsions. For when this is re-
moved the Animal Spirits flow in
orderly, and perform a Motion of
the Guts agreeable to nature. The
thing therefore rightly considered,
it is very clear, That the cruel pain
which almost kills them that are
sick of this Black Passion, and like-
wise the rejection of much Matter
by Vomit, are wholly raised by the
Spirits falling too impetuously on
the Guts and Mesentery, and con-
tracting them; and the rather, be-
cause the rest of the concomitant
Symptoms in this Disease may ea-
sily be explicated by this disorde-
red agitation of the Spirits: For in-
stance, the extreme Parts are cold
in this Disease, whence it is clearer
than the Sun, That this therefore
happens, because the Spirits desert
their station in those Parts, and
crowd themselves too much into
this or the other Part. Therefore, I
think, it is now sufficiently evident,
That this Disease ought to be ascrib-
ed to the Animal Spirits not being
rightly disposed: wherefore in the
Cure I reckon, this should be our prin-
cipal

principal aim, first of all to reduce the Spirits into their pristine Order. And I am abundantly satisfied, That the chief curative indication in this Disease is to fortify the Blood (which is the original of Spirits,) by doing of which the invigorated Spirits may be enabled to maintain that tenor, which is agreeable to the oeconomy of the whole Body and all its Parts. Yet we deny not, but this disorder of Spirits by long continuance may corrupt the Humors: wherefore in the Cure we should always take care of this, That the austere and other corrupt Humors may be corrected or conquered. For which purpose, we give emollient Clysters without Salt, adding only a little Essence of Castor, with great success in this Disease. Or a Clyster may be made of a Pint of Milk with Sugar, and the White of an Egg or Mucilage of Fleabane Seed. And if much Excrement remains behind in the Guts, you may add about two Scruples of Powder of Coloquintida, or a Drachm of Trochiscs of Alhandal, tied in a Rag, as also Oyl of Dill and a little fresh Butter, or a little Dung. A Clyster also may be given only of Oyl-Olive or of sweet Almonds. But if the Matter brought up by Vomiting be bilious, then we should rather abstain from oily things. Some blow into the Guts with a pair of Bellows, that so the Excrements may the more easily come down; but in my Judgment this does more hurt than good. For if the Excrements be hard, I see not how they can come down against the Wind that is blown in, and when the blast is over the Guts contract themselves the closer, because of a greater Influx of Animal Spirits. Besides, if there be an Inflammation

on the Disease is rather cured by closing the Pores with the Heat of the Air, than diminished: therefore some draw the Air out by fire, that it may remain hot, though the Air be hot in being yet when it is blown out, it is cooled again, because it is moved towards one Part only. After this we use to give *Venice Soap* three Drachms to an Ounce and half, by which Remedy I have cured several of this Disease.

Preparations of Castor mixed with Anodynes do wonders in this Disease, because they reduce the Animal Spirits into their primitive Order again. When the Spirit is reduced into Order, and the Acidity is corrected, we may leave our selves to laxatives. For a costive Belly these are common: Manna with Oyl of sweet Almonds drawn without fire, given in Chicken broth and Emollients, as Whey of Goat's-Milk, Cassia also is good, and the following Draught;

Take of Cassia new drawn half Ounce, *electuarium diacatholicum* each two Drachms Barly-water what is sufficient Make a Draught.

Or a loosning Decoction may be given of Leaves of *Senna*, and *Melicacan*, adding paregorick and other minative Herbs. But in this of Carminatives must be given with the greatest caution, because they put the Spirits into greater disorders, and sometimes by dissolving the Coats of the Guts they cause a mournful *Catastroph*. If the Disease come from Excrements hardened about the blind Gut and

of the Colon; which stop
are dissolved into
you may loosen the Belly
in these or the like Emolli-

Decoction of Wormwood,
Pellicory of the Wall, Mallows,
Roots of Marsh Mallows, Peach
Kernel, Linseed Oyl, Juice of
Horse-dung, &c.

Then we must proceed to stroh-
things. For which purpose, I
recommenced the following Physick-
in our Maiden, whose case
mentioned: for after she had
twice of the Wine, she voided
Excrements with sincere
yet such things premised, as

Leaves of Wormwood, car-
bunculus, Bawm, Spleen-
wort, Calamint, Wall-rew half an
handful, Root of Zedoary, Eryn-
go, Burnet each three Drachms,
Angelica two Drachms, the best
Rhubarb three Drachms, Seeds
of Anise, Fenil, Caraway each
two Drachms, Leaves of Sinna-
one Ounce and an half, Rind of
Orange, Tamarisk, Ash each three
Drachms, the whitest crude Tar-
or half an Ounce. Cut them,
and ty them in a rag for a mea-
sure of Wine, of which the Pa-
tient may take three Ounces.

And since we have often (as we
before) found the Guts quite
such as have died of this
it is manifest from thence,
sometimes the Animal Spirits
stand. And Opiates are admi-
good for this end, wherefore
I recommend the following Pow-

Take of Cinnabar native or of An-
timony half a Scruple, Chaly-
beate Tarrar one Scruple, *theri-
aca coelestis* two Grains, or *lau-
danum opiatum* one Grain. Mix
them. Make a very fine Pow-
der, which must be severaltimes
repeated.

Or, if the Vomiting be very
troublesome.

Take of Oyl of Nutmeg by expres-
sion eight Grains, Salt of Worm-
wood one Scruple, Saffron six
Grains, *laudanum opiatum* one
Grain. Mix them.

Sal volatile oleosum Sylvii is good;
or volatil Spirit of Sal Ammoniack
may be dropt in to fifteen Drops.
And all Antispasmodicks are good.
Horstius testifies, That he cured Ili-
acal People only by *elixir proprie-
tatis Paracelsi*. *Willis* his little Po-
tion of Salt of Wormwood with a
Spoonful of Juice of Limons will
be proper, but it must be often ta-
ken.

Some Physicians in an excessive
Obstruction of the Belly are so bold
as to give Bullers made of Lead, or
of *regulus* of Antimony, or of Mer-
cury, Sulphur and Wax, not know-
ing, that the lower part of the Gut
is seldom or (in my Opinion) ne-
ver slipt into the upper: therefore
here we must take care, otherwise
we shall certainly kill the Patient.
Let the Patient rather drink a De-
coction of Goose dung in the
Spring, or an Infusion of Cows or
Horse dung, which is more ner-
vine: for austere Dungs do move.

And various Externals must also
be used. It will be good to use this
or some such Fomentation for the
Belly.

434 Of the Iliack Passion, or Twisting of the

Takes of Leaves of Mallows, Marsh-Mallows, Violets each one handful and an half, Toad-flax, Flowers of Chamomil, Melilot, Tap-mullein each half an handful, Seed of Line, Anise, Dill each three Drachms. Boyl them in a sufficient quantity of Milk or fair Water. Make a Fomentation.

Some use Brandy for a Fomentation, If it come from Humors, or, as they say, from Wind.

In our Opinion Badger's-grease is proper, with which the whole Belly, especially about the Navil, must be anointed.

Yarn also of Flax or Hemp boyled and applied, is good. Also a Decoction of Chamomil, Hemlock, Elder, Henbane, Dill and Cresses may be applied warm to the Belly.

Oyl of Henbane, Palm, Worms, Dill, Scorpions, *unguentum clysmaticum*, yea and all Paregoricks and Nervines are proper here, and sometimes they are mixt with Anodynes;

Take of *balsamus spasmodicus Mynsichti* halt an Ounce, Oyl of Bays two Drachms, *unguentum dialtheæ* half an Ounce, Badger's-

grease three Drachms, of Castor one Drachm, them. Make an Unguent.

A live Whelp may be laid on the Belly.

But if the Disease have come from a Rupture, it must be cured by divers Externals. To which an emollient Fomentation and Bath ought to be prescribed, till the Fibres of the Guts may be relaxed. We should exert our utmost to put up the Gut into its place. I cured this in one, which came from a Rupture, only by often using the Fomentation following;

Take of Leaves of Mallows, flax, Flowers of Chamomil, Tap-mullein, Dill, Elder, one handful, Cummin three Drachms. Boyl them in Milk, and make a Fomentation.

Or it may be made into a Plasm, and so applied to the Rupture.

Compare with these things we have written hereafter of the Ruptures.

CH

CHAP. VII.

Of the Colick.

§. I.

Among the intricate Diseases, which use miserably to torment and vex Mankind, the Colick, that cruel Disease, is none of the least, which sometimes sticks as if a Snake were driven in, gives poor wretches a grievous Torment; sometimes like a Madness, it torments a Man violently; sometimes it leaves its seat, and acts hostilities on external parts, and often weakens them to death: therefore it will be derived from *καλῶς*, i. e. to torment. *Celsus* calls it a Disease of the larger Intestines, and others call it a pain of the Guts; it is commonly called the Colick pain and the Colick.

The Colick is commonly described to be a troublesome and violent sensation, depending on the interruption of continuity, either of the Coats of the Colon, or of the Muscles adjoining. That which may interrupt continuity is either a superfluous Acid or a saline Humor, or a cold, or rough and hardened Excrement: it may also be the Animal Spirits put in disorder either in the Brain, or in the windings of

the Mesentery. We think therefore that the Colick is Humoral and Spasmodick. We call that a Humoral Colick, which has its rise from any Humor; and then the Fibres of the Gut or Mesentery are convulse. We call the other Spasmodick, which arises not from the Humors, but when this Spasmodick disposition lies in the Spirits themselves, which are tumultuously exorbitant: for I reckon, the Colick arises from nothing else, but a violent impulse of the Spirits crowded thick upon the said Membranous parts; whence comes Convulsion and Pain, of which we shall say more when we come to treat of the Cause. We may very safely allow a distinction into Phlegmatick, Flatulent, Cold, Bilious or Hot.

The Colick differs also from the Iliack Passion in regard of pain; which is more violent in the Iliack Passion, and comes with Vomiting of Excrements. And it differs from the Stone in the Kidneys, because there appears Gravel in the Urine, and there is never any pain in the Groin, and about the Pubes; and the pain of the Loins is something violent and fixt.

§. 2.

IT is agreed upon by all the old Practitioners, that the subject of this Disease is that lax Gut, which is called *Colon*, because it is long and winding, and the sharp Humor may stick there by reason of the numerous valves. Therefore *Celsus* calls the Colick a Disease of the larger Gut; and *Alexander* says, the large and thick Gut is affected, as it may well be in the substance of its Coats. *Willis* acknowledges the Mesentery for the part affected, in which there are many large Nerves, and their *Plexus* and distributions are very remarkable. Since therefore this part is very sensible, and very liable to an afflux of Humors of the Nervous kind, he makes it the seat of the Colick.

We think, that the cause of this Disease is often contained in the Cavity of the Guts, and among their Membranes, in which when Particles are received in the Pores, through which they cannot pass, they are shaken, reciprocated, and as it were sown in those Pores, and so by vellicating the Fibres of the Nerves, and by hurting and breaking them, they produce no small pain. If the Chyle also, either through the fault of the Stomach, or diversity of the Bile, or through some fault in the pancreatick Juice, or in any other, grow sour, by pricking and vellicating the Fibres of the Guts it may easily produce violent pain; especially in such as have it hereditarily. Which disposition, I think, consists in this, that from their infancy they have got very tender and tremulous Fibres in their Guts,

which upon the slightest and by an inconvenient may be affected with a pain.

And if there be a mucous which lines the inside of the Stomach, we think it ouzes the small Arteries, through a crasie of Humors, especially Blood: but generally the rises from the reliques of digested and fermented Chyle, which reliques do ferment together with the bile and pancreatick Juice, whether they be good or corrupt. Wherefore Colick pains often rise in People fasting, and in such as have their Guts emptied by long abstinence; because in such case the peccant matter is digested out of the mass of Blood in the Guts. And we make no mention also, but the Cause of this Disease does often ly in the mesenterick Mesentery, and its various folds, the *peritonaeum*, among other Membranes and Coats of the Belly. For the mesenterick Cawl are composed of many Fibrous, Nervous and Membranaceous Parts, which are therefore very subject to pain. Whose opinion of ours we prove by what follows. For in a Cawl Rupture through its compression, and sometimes Inflammation, I have observed pains as like the Colick could be. And *Galen* confirms this in my opinion by the observation he made of a Souldier, that had his Cawl cut off, who was constantly troubled with Colick pains, and was Cured by *Galen* by clapping a covering of Wool, upon which external heat, the animal Spirits caused no more Convulsions. The example is not unlike, which I observed in the forehead of a Woman.

at Hanover, in a Village called
Hettelbach, who, because the o-
ment hung out of the Wound of
the abdomen a little Inflamed, one
could admire, what violent pains
her Belly, like unto the Co-
lick, she endured, but without Vo-
miting.

§. 3. Diagnostick.

A Colick in general is known by
a most violent pain and tor-
ment about the region of the Guts,
sometimes fixt in one place, like
a piercer or stake; sometimes va-
gant and unstable, now torment-
ing in that Part, anon in another,
according to the various and vio-
lent influx of the Spirits into this
or that place, and according to
the various site of the peccant mat-
ter which possesses the place. Lit-
tle Urine is made; for the Guts
being distended by Wind require
more room, whereupon the neigh-
bouring Vessels, the Ureters and
Cawl are compressed, so that little
violent matter can get to the
Kidneys. There is a great velli-
cation of the Abdomen and its Mus-
cles, and a spasmodick retraction
of all the Bowels, so that you can
see no Belly at all. A very acute
pain does attend it, and sometimes
vomiting; because while the Spi-
rits flow into the Fibres of the Sto-
mach, they flow also into the cir-
cular Fibres of the Pylorus, and by
reason that, it happens, that, while
the Stomach in the mean time is
contracted, and the contents cannot
get out, the Pylorus now shut, they
must of necessity be evacuated up-
wards. By the voiding abundance
of yellow and green Cholera it is e-
vident that the duodenum and Gall-
Bladder are both affected in this

Disease. Sometimes the Bladder
and Ureters, as we said, are con-
tracted, whence a total obstruction
of Urine arises. And oftentimes
the Guts are contracted, so that
there is a continual costiveness, or
if any thing be brought away ei-
ther by Art or Nature, it is gene-
rally flatulent, as I have observed
in the Stone Colick, which is e-
ver attended with a violent pain in
the Loyns. But it is evident that
it is a mere Spasmodick Colick,
generally arising from the use of
Spirituuous things, ill boyled Beer,
and Chalk water. There is Thirst,
Loathing, want of Sleep, dryness
of the Tongue, a Fever, heat of
Urine, bitterness of Mouth, some-
times a distension of the Belly like
a drum, sometimes a Contraction,
Swooning, cold Sweats, so I ob-
served in an old Man a Priapism, at
length come Convulsions and other
signs of death, or it ends in a Pal-
sy. In a Colick of long continu-
ance, I ever suspect the Cause lies in
the Mesentery or Cawl: But when
the Disease ceases presently upon
taking Loosning and Emollient Me-
dicines, I am perswaded the pec-
cant matter did lie in the large
Guts. And when the pain is not
very deep, but vagrant and rend-
ing, it gives an undoubted testimo-
ny, that the nervous kind is af-
fected.

§. 4. Cause.

THE ancient Practitioners take
the immediate and proximate
Cause to be a solution of continui-
ty in the Colon, arising from a sharp,
gross, feculent matter, which ei-
ther fills, distends or frets. Where-
fore the propinquous cause that
dissolves continuity, according to

their opinion, is a gross, phlegmatick and vitious Humor got among the Coats of the Colon; or it is a wind, distending, rending, and tearing the Guts. And hither they refer all bilious fretting Humors, which often cause an Inflammation of the Guts, all Melancholick feculency, grumous Blood, Worms, Stones, hardened Excrements which may cause the same; also sharp Sanies, a wound in the Guts, also poysons and strong Purgatives.

§. 5.

Petracellus denies that the Colick can arise from Humors, he rather thinks, the cause is the dissolved Spirit of Salts, wherein, through the extremity of their Tastes, there is either austerity, acidity, acrimony or saltness, which may easily vellicate and corrugate the sensible membranaceous Fibres. And he says, That a Body does adhere to this Spirit of the Salts, which is coagulated in that place. He reckons therefore, That the cause of this most violent Pain is a Salt, or rather the Tarrar of the Chymists, either too much dissolved or too much coagulated, infecting, straining and with divers pains tormenting the Guts and Part thereabout, with their styprick, ponrick, sowre, aluminous and sharp Spirits. This clearly appears from *l. de tribus princ. c. 4.* where he says, That the Colick arises from Salt predominant in the Guts. The several sorts of Colicks must be taken from the differences of Salts and saline Spirits, namely, vitriolate, aluminous, sowre, and the like. And the degrees of the Colick must be taken both from the

divers Powers of the Spirits, and their further circulation and station. But if the neighboring Regions of the Kidneys and bladder be full of, and covered with such a tartareous Matter, they are put into Paroxysms and convulsencies, from the compression of the Spirits, that arise from the Mine and Centre of the Colick.

§. 6.

Helment thinks the Colick is produced, when a preternatural Acidity is in the Meat or Drink, and he testifies *de potstat. ment. p. m. 292. n. 23.* That this Disease often comes from an acid Salt: for he has observed, that the Colick has come from eating Mulberries. The more Acid the Food, the more violent are the Pains. When the Ferment of the Gall has returned the acidity of the Chyme to a salt volatility, then there ensues a vitiated Digestion, which afterwards produces a Mucilage, where in Acidity is included. If therefore this over tough Matter, mixed with a vitiated Ferment, is the cause of Gripes, do stick to the Guts, then it will cause most exquisite pain. For the Guts, that they drive out this slimy Stuff, contract and corrugate and draw themselves together, and when the Guts are contracted, it so happens, that the Muscles of the abdomen also are contracted and convulse, and why not the acidity, so much as enemy to the Guts, contract them. The cause of this Disease lies in curking, like a thief, in the Gall, for these acid Salts, if they be not conquered by the fermental Blood of the Gall, become the causes of the Colick.

pains for they are the occasions, that the *Archeus* of the Stomach is enraged, which produces a most dangerous Colick, and provokes the *pylorus* so that in its fury it ends in a shaking of the Hands and Feet, by affecting the nervous system with its furious *Blas*, and by destroying its tone.

§. 7.

Willis does, with *Carolus Piso*, rank this Disease, so much an enemy to Mankind, among Diseases of the Brain, upon this account, because he thinks, as far as can be, that the Seat and Cause of this Disease lies in the nervous Parts. The better to confirm this Opinion, he has found that the nervous Liquor, which if it degenerate into sower Recreation, then by distending the sensible Fibres, by parting them in sunder, and by putting them into dolorick Corrugations, it may easily produce this Disease. Which vitreous Juice, he reckons, goes down from the Brain by the nervous Ducts to the Guts, and are gathered about the Parts in pain and the Mesentery, as also, that it grows turgid of it self through plenitude. The peccant Matter, therefore being by degrees gathered about the Mesenterick plexus of the Nerves, and others, grows turgid either of it self or occasionally, or perhaps it ferments with a fixt Saline Humor, discharged out of the Blood thither, and by consequent torments the nervous Fibres, of which the Mesentery is full, with troublesome and painful corrugations. Yet he does not deny, but the animal Spirits flowing in im-

petuously, do usually raise these Spasmodick dispositions, as he proves by several reasons. Concerning which the reader may consult the Author himself.

§. 8.

Solbitus recounts and explains the Causes of several Colick pains. He thinks that a hot pain is produced by a fatty bile powerfully and viriously fermenting with an acid Pancreatick Juice. He thinks a chill pain has its original from a very acid and sharp Pancreatick Juice, fermenting with Bile that is not so far, or less in quantity. He ascribes the cause of a piercing fixt pain to a pancreatick Juice, that is very sharp, mixt with viscid Phlegm, known by the name of vitreous Phlegm. He ascribes a dull pain to abundance of viscid Phlegm, and a distending pain to viscid Phlegm rarefied into Wind, which distends either the Guts only or the Belly also. He ascribes a cutting pain to an over acid pancreatick Juice. And so he orders the cure to be varied, according to the variety of the causes.

§. 9.

The *Cartesians* derive this Colick pain usually from a bilious Humor joyned with a fretting Salt, which fretting Salt is contained not only in the Cavity of the Guts, but between their Membranes; therefore its Particles, when they are received into the Pores, through which they cannot pass, rub as it were one against another in these Pores, that is, when these pointed, rigid, pricking, fretting

and cutting Particles are left in the Coats of the Guts, and then being violently driven, with their Points they produce this most exquisite pain, by vellicating, fretting and corrugating the Fibres. And by consent the rest of the Parts, namely, the Stomach and Bladder may be convulse, whence come Vomiting, difficulty of Urine, &c. And sometimes the Pores of the Guts may be obstructed by viscid and gross Particles, and so a Colick may arise. Sometimes it comes from distension of the Guts. But if one should touch and separate such a Membrane with a Pin or any such Instrument, what violent pain would it not put a Man to?

§. 10.

VVE, as we said before, do think that the Colick is either humoral or spasmodick. We call that *humoral*, when some strange Humor is often mixt with Wind, which offends the Animal Spirits, and so is the cause of all the mischief. These Humors are bilious and sharp, namely saline and scorbutick, which being joyned with a fretting Salt, cause pains joyned with convulsive Motions, by pricking, fretting and cutting, the *plexus* and Nerves, not only of the Guts, but of the Mesentery, Cawl and other Parts. Yet generally, we are perswaded, this Disease arises from an Acid, whether it be an acid slime that sticks pertinaciously to the folds of the Stomach, or hardened Excrement, or Wind rising from ill Fermentation, which shows that there is an acid, austere viscidty, which fermenting turns into a flatulent Gas. Worms and the Stone also by vellication may cause the

same Disease. For this is often and vitious, yea corrosive, and seldom in the Coats of the Intestines in the Cawl, but most frequently in the *plexus* and Nerves of the Mesentery. The Bile also is so changed and corrupted by an Acid, that it turns quite acrid. Wherefore they that are troubled with this Disease, are always stive; and the repeated Contractions of the said Parts are caused by a sharp and vitious Acid. And because we see Wind is expelled, when ever volatil oily Matters upon Phlegm, we reckon, that Contractions of volatil Bile meeting with thick Phlegm, do dissolve it into a subtil Wind, which distending the Cells of the Colon retard the Excrement, and hinder the due flux of the sensitive Soul, whence proceeds costiveness.

These Colick pains often arise in a scorbutick Disposition, which besides the aforesaid causes, we may derive from lixivial serum, which by distending and contracting the membranaceous, sensible Parts contribute something. Often this vitious Matter returns upon the Nerves of the Loins, which is the reason, why the Patient feels violent pain about his Loins. And this morbid Seminary being received back again, is carried to the very spinal Marrow, and communicates the like taint to it, and the spinal Marrow, being almost spoyled by it, communicates the contagion to the Nerves of the Limbs, that arise from thence, by whose fixing, coagulating and lessening virtue the concatenation and commerce of the Animal Spirits (the Authors of all Motion) is interrupted, and thence proceeds the impotency of Motion.

call that a spasmodick Colick, which the Animal Spirits are affected by some subtil Matter, they intermit their ordination, and flow tumultuouſly in the Meſentery, and other ſemimembraneous Parts, and by vellicating the Fibres of Nerves, and by hurting and ſtriking them, they produce no pain. Or it may ſo be, that the moſt ſubtil Particles are ſo reſted in the Pores of the Guts Meſentery, and of other Parts, that they cauſe a kind of Inflammation, whence proceed theſe violent pains. And whereas the Patient complains of an intolerable pain about the middle of his Stomach, with cruel Vomiting of Matter as green as Graſs, the cauſe of that is nothing but a crowding of the Spirits into theſe ſaid Parts, eſpecially into the ſtrict Fibres of the Pylorus, whence proceeds a Pain and Conſtriction of the Stomach, and a toſſing of other Parts. For it muſt not always, becauſe we ſometimes ſee a bilious green Stuff vomited or ſtewed by Stool, preſently conclude ſay, That the Diſeaſe reſides in the Humors, or that this cruel pain proceeds from the Action of any Humor, gnawing and ſtricking the Part wherein it ſits, and ſo take it for the cauſe of the Diſeaſe, and therefore think only to extirpate it by purgative Medicines. For it is clearer than the Sun at Noon-day, that the indiſpoſition, under which People at Sea ſuffer, does ariſe from the unregulation of the Animal Spirits upon the troubled Sea; and yet ſometimes ſee, a Maſs of graſs-green Stuff comes from the Stomachs of the beſt healthy Perſons, when they go to a good way to Sea, who

but an hour before had no porraceous Bile in them; as I have experienced in my ſelf at Sea. Yea in Fits of an Epilepſy do we not often ſee Evacuations, where nevertheless there is no bad Humor in the Guts? Alſo in a ſickly breeding of Teeth, with ſtrange Excrements come away, only through the diſorder of the Spirits, which, I know not how, deſtroys and perverts the Ferment of thoſe Parts, or by the ſtrength of Convulſions it ſtrains ſome Liquor or other of a ſtrange nature, which may give the Humors that colour, and in my Judgment the various commixture of Bile with the pancreatick Juice may cauſe this greenneſs. For if the pancreatick Juice be mixt with a ſaline volatil oily Bile, this porraceous greenneſs may ariſe from their mixture; concerning which colour, ſee Etmüllerus his *Valetudinar. infantil.* §. 21. de torminibus & variis alui excretis infantum, where you will find this ſubject elaborately handled. The thing therefore rightly conſidered, it is apparent enough, That this violent pain, and the vomiting of green Matter, which almoſt kills People in this Diſeaſe is moſt certainly produced by the Animal Spirits, flowing too impetuoſly into that Part of the abdomen, and contracting theſe ſame membranous and fibrous Parts. For the Guts with the Parts annexed are often ſo contracted and corrugated, that the Muſcles of the Belly are contracted with them, and the Patient looks as if he had no Belly at all, as I have obſerved in ſeveral, who have had their Belly ſo contracted, that I could feel nothing but Skin and Bones. And I am perſwaded that the very Spirits may be ſo diſpoſed

posed by the Air and other very subtil Particles that one may fall into this Disease, without any peccant matter lying in the *abdomen*. But I am weary of dwelling any longer on things that are so well known.

These we take to be the proximate and continent causes; the procatarrick and remote causes of this Disease may be divers, a Complexion phlegmatick, cholerick, or melancholick, and an innate disposition to the Colick contracted from ones Mothers womb. Also the fix non-natural things, of which we shall speak in the Diet.

§. II.

THe Causes being hitherto enumerated, on which as on proflick Parents this spasmodick Disease depends, we must direct our thoughts to the Prognostick. For nothing can gain a Physician greater reputation among his Patients, than to give sure presages of future contingences. The Colick pain has not always the same issue. For sometimes it is easie to be cured, sometimes hard, yea dangerous, and now and then mortal. not so much on its own account. as of Diseases that are either conjunct or subsequent. This spasmodick pain often ends in a Palsy, or Epilepsy, or Gout, or some sleepy Disease; it often degenerates into the Iliack Passion. Because the Blood, being hindred in its motion by the corrugation of the fibres, and gathered more than it ought in the interstices of the vessels, breeds an inflammation, whence proceed a *Miserere mri* and a Gangrene Colick, which comes from an inflammation of the Guts, or from an Excoriation, Wound

or Ulcer in them, or from and salt Phlegm, or from corrosive an Acid, or one that is demical and malignant, or endemical, if it be not always it is at least tedious and dangerous and that is usually mortal, followed by an Iliack passion. Colick pain is not dangerous, it comes from an evident cause. But that which is hidden is very dangerous, for it does not give way to Remedies. Sometimes it lasts some months, sometimes a year, and it comes to a Palsy or to some other disease and it often returns, of which are so many examples, that I need not to instance in any, yet I have hope of cure, when the Patient is young and in his full strength. I promise some famous Medicines which will quickly cure it, and that directions be followed when you are unwilling to do a miserable thing not to do it can to live. The Disease will have an end, if you do but use violence and disorder of the spirits, and destroy their motion. Yet it often is a grievous Disease, and requires strength to undergo it, when it takes Women with or Lying-in, old people, and as are wasted with Diseases, usually dangerous. And it is most certain sign of death, the hiccough, want of sleep, um, cold Sweats, and coldness of extreme parts supervene, the violence of the Disease, then the Patient will find escape.

12. Dietetick Cure.

Our care hitherto has been bestowed upon enquiry into the Nature of this Disease, it requires therefore that we bestow a little on the Cure of it, which as in this as in other Diseases consists in a good Diet and Medicines. Choose therefore as pure and thin an Air as you can, forbear all that is thick, cold, over hot, cloudy, moist, or full of Vapors. Let the Meat be of good Juice and easy Digestion. Forbear all starchy Meats, such as are all Pulse, &c. Forbear likewise all salty and phlegmatick Meats. Be especially troubled with It, upon Carp, that was not well broiled. All Acids are very hurtful in this Case, and so are all horary Meats, especially raw. All sweet Meats hurt the Patient, because all such things contain an acid corroding in them, as appears from Pifo's Observation, who writes, how that the Juice of a Sugar-cane turns sour in a short time, and adds, that a Spirit is distilled off Sugar, which the Portuguese call *Aquaden*, which cools with the greatest Rapidity, contracts the Tongue, closes the Bowels, corrodes Mercury, and is of a nitrous and bitter Taste. For Sugar dissolves Antimony it self, if it be mixt with it for three days and distilled. Let the Patient drink be a decoction of China with Raisins; or a small wine, which has no Acidity in it. Forbear all carcareous, Franconian, sulphurated and palled Wine. Rembse writes, That all Wines are brought in this Case. But I cannot see how any Wine, that has a violent acid in it, can do hurt. There-

fore I shall commend Rhenish and Moselle Wine, Neccarine, Hirschstein and Mitchelback Wine near Hanover, which are excellent Wines in the Colick, Gout, and Stone. Beer not well boyled or wrought, too new and thick, is naught. Drink made of Fruit, Perry and Cider, such as Country People make, is bad. Let the Patient take but sparingly of spirituous things, because they much disorder the Spirits.

Let the Patient observe a mediocrity in Motion and Rest: for excess in either does harm.

Let him sleep longer than he wakes.

Let him never give way to the passions of his mind, especially let him forbear Anger, Grief and Sadness; all which contribute, though in a different manner, to the producing of a Colick.

The excreta and retenta must be duly kept to nature's laws; the Belly especially must be kept loose; but forbear all violent Vomitors and Purgers; for they do more hurt than good. Hither also we refer preternatural Causes, precedent Diseases, inasmuch as they translate the Matter to the Guts, deprave Concoction and Fermentation. Intemperature of the Brain, Blood, and Lympha are very effectual in producing a Colick.

§. 13. Pharmaceutick Cure.

THE Ancients insist on a different method of Cure, according to the difference of the Causes whence it is produced. The cure therefore of a Colick which arises from the proper Diseases of the Guts,

Guts, to wit, an Inflammation, Excoriation, Wound or Ulcer consists in the cure of that thing; because when the Cause is removed, generally the effect is removed also. A Colick that comes from Worms, or Stones, or rough and sharp Bodies swallowed down, as Pins, is cured by Evacuation of those things. One that comes from bilious Humors is cured, when they are tempered and carried off; and so, if a tough, viscid and sharp Phlegm have produced it, this must be cut, attenuated, corrected, and then carried off by Phlegmagogues. To which end they commend inciding Decoctions, especially of Woods, Barks and carminative Seeds. Then what is fit to be carried off, they purge with Phlegmagogues, of medicated Wines, Potions, Pills of Gums, adding Carminatives and Narcoticks. But if the Disease proceed from Melancholy, they give Melanogogues: And that Humor must be corrected with watry things, as Whey; and with earthy things, as bole Armenick, the Jaw of a Perch, &c. The Ancients cry up Wolf's Guts, as a Specifick in this Disease. If bile abound, they give Cholagogues.

The wind Colick requires, 1. The amendment of both the material and efficient Cause. 2. The Discussion of wind raised by them. 3. The Mitigation of the pain. 4. The carrying off the material cause. To which ends, they commend the following Clyster;

Take of the emollient and carminative Decoction one Pound, *diacatholicon* one Ounce, common Salt one Drachm, Oyl of Dill 1x Drachms, Aniseeds de-

stilled ten Drops. Mix and Make a Clyster.

An emollient and carminative Decoction may be made of the some such things;

Take of Root of Smallage Leaves of Marsh-mallow, Green each one Ounce, Leaves of Pellitory of the Wall each an handful, Seeds of Aniseeds, Caraway, Lovage each an handful, Drachms. Boyl them in water. Keep the Colicums use.

When the Body is purged, give things to allwage pain, as of Sweet Almonds in Malley Hippocras Wine, Treacle, Malley date with Castor, and other dates, as *Philonium Romanum*, *quies Nicolai*, and a thousand other things. Among externals, commend Yarn boyled in Ley applied hot to the Belly; Bay Millet, Oats and Salt fried, and other carminative and emollient Herbs. They also apply Unguents, Liniments, and Cataplasms of Linseed Oyl, white lies, Chamomil, &c.

§. 14.

THE Paracelsists say, That a Colicase is saline, and that it may be cured with Salts. Therefore they will have the dissolved Tumor coagulated, precipitated, and afterwards carried off. The salt is so, which is the internal principle of man's body, degenerating from its nature, must be corrected and strengthened by the elementary Salts. For expelling the salt the

commend Elicampane; they do approve of violent things, nor use of Coloquintida, and such things; for the salt, as *Paracelsus* will not bear violence. And while the spirits are in this thirsty, and out of order, spirit of Nitre, Tartar, common Salt, Oyl of Nutmeg, Cloves, Gummi, Amber, Sulphur, & Turpentine will be proper, Civet also may be applied to the Stomach with Oyl. The extract of Orange in good wine is an excellent medicine; and so is extract of *aromaticus* with Cinnamon, burnt Harts-horn, and the one found in Wolf's dung is reckoned as a great secret by *Paracelsus* in this Disease. He commends Cataplasms of the dung externally. He says, that sweet, fat, and oily things are good in drink. Above all things he extols his *laudanum opiatum*.

§. 15.

Elmont has often cured a Colick with true *laudanum* without opium. He also orders the belly to be fomented with some Ointment: and he highly praises Aniseed. His disciple recovered one of the Colicks by giving him an emollient Clyster with three drachms of *Phlegma Romanum*, and constantly giving him *laudanum opiatum*, and warm broth, with *China* root and dancus seed boyled in it. He concluded the cure with decoction of Aloes.

§. 16.

Allis will have the cure of the Colick to be be-

gun with a Clyster, which at first must be lenient and emollient, whereby, as by an inward Fomentation, the Corrugation of the Fibres is stopt, and the raging Spirits are pacified. To which ends he orders one to be given of warm Milk and Sugar; or emollient Decoctions of Mallow, Marsh-mallow, Elder, and Oyl of sweet Almonds; also a Decoction of a Sheep's head, or Calves feet; or only Oyl Olive, or linseed Oyl. If these Clysters do not loosen the belly sufficiently, he would have men use carminative or bitter Decoctions, in which some *electuarius diacatholicum*, à *baccis lauri*, or *hiera picra*, is dissolved. Or;

Take of Infusion of *crocus metallorum*, or a healthy body's urine, one pound, Venice Turpentine dissolved in it one ounce and an half, brown Sugar half an ounce. Mix them. Make a Clyster.

For the balsamick particles of the Turpentine, comfort the Bowels, and assuage the Fibres. But if the Gripes will not give way to these gentle things, he thinks, we should have recourse to hypnoticks, as to the last refuge. For which purpose he commends his *laudanum liquidum tartarizatum* from sixteen to twenty drops, given at the hour of sleep in a Spoonful of Chamomil; or some other carminative water. When these things are given, he gives either a Vomir, or a gentle Purge, of *Tartarum emeticum*, or white Salt of Vitriol; or of Resin of Jalap, *pilule Rhudii* and *Mercurius dulcis*, to extirpate the matter of the Colick. And at last, when we cannot attain our end by these means; he advises

advises salivation, as the only remedy. If the Colick be of any continuance, and contumacious, besides the foresaid things he advises divers Diureticks and Spaw-waters. Among externals he commends Epithems to the belly of leaves of Mallow, Mercury, Pellitory of the wall each four handfuls, flowers of Elder, Chamomil, Melilot, each three handfuls, a Sheeps head. Boyl them in a sufficient quantity of Spring Water. The Colature may be used for a Fomentation, with Flanel dipt into it warm, and wrung out, and so applied, repeating it, when the pain is violent. He also says. That a Lambs Cawl. or Lungs, and other inwards of Brutes, taken out and applied warm, do wonderfully ease pains of the Colick: But in some constitutions he observed, that Epithems of hot things, or applied hot, rather encreased than abated their pain. And in such cases he rather commends Fomentations of solutions of nitre, as sal Ammoniack, and sometimes, with *Septalius*, one made of pure cold Water.

§. 17.

Splittus cures a hot pain, arising from fat bile, by Acids and Watry things. Here is one of his Receipts;

Take of water of Cichory, Sorrel each two ounces, Syrup of white Poppy one ounce, Spirit of Nitre eight Drops. Make a mixture, to be taken by Spoonfuls.

And in this case the following Emulsion will be proper;

Take of the four greater each one Drachm, almonds three Drachms, Poppy seed one Drachm, Chamomil and Mallow make an Emulsion.

Then it will be necessary, the bile so corrected, be cast off, to which purpose he prescribes the following Electuary;

Take of Pulp of Tamarind ounces, conserve of Damascus ten Drachms, Electuary juice of Roses one Drachm, of *tartarum virgatum* one Drachm. Mix them. Make an Electuary. Let the Patient take the quantity of a Nutmeg.

A cold pain, which is contrary to the other, must be cured with an aromatick Spirit of wine, impregnated with a volatil oyle for instance;

Take of water of Fennel, Thyme simple each half an ounce, Wormwood one Scruple, Clove eyes half a Scruple, Syrup of *Cardus Benedictus* half an ounce. Mix them. To which sometimes one grain of *laudanum* may be added.

He endeavors to cure a pleurisy first pain by correcting and tempering the acid Acrimony of the Pancreatick juice, and the viscosity of the phlegm, joynd with it, which is done by gum Ammoniac, *galbanum*, *sagapenum*, &c. He writes, that Oyl of *Asiatick* horn is of great use in correcting vitreous Phlegm. And he commends Phlegmagogue pills, *bed, prax. l. 1. c. 14. §. 5.*

with a sense of Contor-
sion caused by the Austerity of
the Juice, he magni-
fies of Sal Ammoniack and
Castor. For which
he commends the follow-
ing Mixture, to be given by Spoon-

of water of Penny-royal two
ounces, Fenil one ounce, Tin-
cture of Castor three Drachms,
laudanum opiatum two Grains,
Syrup of Mint six Drachms.
Mix them.

A distending pain, caused by
it, he removes by divers Car-
minatives, Spirit of Nitre, &c.
Volatil Salts are good, which
correct a viscid Phlegm and
Bile. Among externals he
commends *Unguentum Martiatum*
et alia compositum above all o-
thers, adding some oyl of Chamo-
myle, white Lilies, Bays, &c. And
a cruminate Plaster, applied to
the Belly will be good.

§. 18.

They that build on the Carte-
sian fundamentals, do all
they can, to blunt the sharp,
rude and cutting particles,
and to break the violence of the
Humour, and to assuage
the nervous Fibres, that are
distended thereby; which according
to them, may be obtained by di-
vers anodyne, paregorick things:
they often give Opiates, that
the Patient may have ease, and
the Physician gain time, to carry
off that foreign salt. Then they
give a gentle Purge of extract of
Rhubarb one scruple or five and
twenty Grains. Then they give a

Sweat, which must also be a little
Anodyne;

Take of *Bezoarticum minerale* twelve
Grains, oriental Saffron six
Grains, Camphore three Grains,
laudanum opiatum, one Grain,
water of *carduus benedictus*, Mint,
Syrup of red Poppy each what
is sufficient. Mix them. Make
a Draught.

They also advise Clysters, and
Externals, which assuage the hurt
Fibres, and stay the impetuosity of
the animal Spirits; all which you
may find in the following Section.

§. 19.

We do think in a humoral
Colick, that the cure
must be directed to the peccant
Humor. If therefore, we suspect,
that this cruel Pain comes from
the Acrimony of hot, sulphureous
or bilious Humors, which we may
know by a kind of burning in the
parts affected, thirst, vomiting, of
bilious Matter, and other Signs,
then we commend the following
Mixture;

Take of water of Wood-sorrel,
Plantain, Cichory each an
Ounce, *laudanum opiatum* one
Grain, spirit of Nitre twelve
Drops, Syrup of Orange pill
half an Ounce. Mix them.

Emulsions, but especially Opi-
ates, are very good. And now
and then a Clyster both laxative
and anodyne may be given and
gentle Cholagogues; but we es-
pecially approve of a Decoction
of Tamarinds, by which alone we
cured a *Switzer*, who studied Di-
vinity

vinity at *Hanover*, beyond the expectation of another Physician, who had given him over for dead. To which purpose a gentle loosening Decoction may be often given in a small Dose: to wit;

Take of leaves of Bawm, Pennyroyal, Spleenwort each one Handful, root of Lovage, Fenil, *Asparagus* each half an ounce, leaves of Senna six Drachms, Mechoacan three Drachms, seed of Fenil, Sermountain each one Drachm. Boyl them in flesh Broth to a Pint. Add of *Syrupus de duabus radicibus*, what is sufficient. Mix them.

In this case Fomentations and Cataplasms of emollient and antiscorbutick things may be outwardly applied. I often assuage Pain and evacuate the peccant Matter both at once, by giving Opiates and Cholagogues together. When the pain is gone, I order the following, or some such like pills;

Take of *Massa pilularum tartarearum* half a Drachm, *diagridium* twelve Grains, Oyl of Amber one Drop, with *tinctura proprietatis* or *essentia anodyna* make pills for two Doses.

For nice persons I use the following Potion;

Take of Calabrian Manna two Ounces, Dissolve them in a sufficient quantity of Mint and Fenil water; add Frog-spawn water half a Drachm. Mix them.

But if the Disease proceed from cold and sharp Humors, then the following Clyster may be given;

Take of the emollient *duus benedictus* each an ounce, root of Elecampane, *langal* each two Drachms, them in sweet-Milk, Barly one Ounce, one an Egg, oyl of Fenil Scruple, or Oyl of *niper*. Mix them, make a Clyster.

I ever observed admirables in adding an Ounce of *aqua benedicta* *Rulandi* to the Clysters, and from such *Clysters*, as we meet with *rius*, *Sennertus* and others, also boyled with Garlicke supped. Milk likewise with a good quantity of flowers, drunk especially in morning, if the patient can himself in bed and sweat good. A Clyster also made of milk one pint, *mas* Sugar half an ounce, one ounce and an half, *cum* two Drachms; or *guentum Clysmaticum*.

In this case a Drachm of *sperma ceti*, not rancid, may be given in generous wine with success. So Oyl of sweet *Ala* with a little salt, or one *laudanum opiatum*, or three of *Camphore*, is good.

If an acid, or (to speak the vulgar) a melancholick humor, cause this pain, it may be corrected. For this purpose I commend all manner of *Ala* which are excellent good with Opiates. I also prescribe Powder of Crab's-eyes, *sperma ceti*, Bezoar, and *iberica* which is excellent in this. All testaceous Powders, *Asses Milk*, *antimonium* *Exp*

Castor (as it is endued with
small oily Salt) and finally all
oily Salts are proper to im-
precipitate the exorbi-
Acid. And divers Externals,
Cataplasms, and other
minative things are good. When
pain is abated, Melanagogues
with Carminatives may be
given: If there be any austere
umor, and the body be bound, a
Clyster may be given with a little
Juice of Castor in it. In a scor-
rick Disposition Antiscorbuticks
may always be added; and after-
wards the peccant Matter must be
removed by Hydragogues.

The wind Colick *essentia car-*
minativa Wedelii and our carmina-
tive Spirit, which follows, will be

Of Orange pill one Ounce
and an half, root of Elecampane,
Mastick, Master-wort, Galangal,
Aniseed, Bay-berries, each half
an Ounce, Castor one Drachm.
Let them be infused in spirit
of Juniper Berries and generous
Wine, then distill them, and
keep it for Use.

This is also an incomparable
draught in the Colick;

Of generous Wine one Ounce
and an half, *aqua vita Matthioli*
half an Ounce, Oyl of sweet Al-
monds one Ounce, *laudanum o-*
porinum two Grains, Camphore
three Grains, Salt of *carduus be-*
ne-dictus one Scruple, Saffron
six Grains, *spiritus salis Ammoni-*
aci or *salis dulcis* half a Scruple,
Extract of Poppy two Drachms.
Mix them and shake them well
together, for one Draught or
two.

If Worms, or Stones, or harden-
ed Excrements be the Cause, we
must always take care to get them
out of the Body. In a spasmodick
Colick, we must endeavor first to
correct the morbidick matter, lodg-
ed generally in the nervous Folds
of the Mesentery, to remove the
Solution of Continuity, and to
slacken the over quick, active, and
spasmodick irregular Motion of
the Spirits, into the parts of the
Abdomen and to reduce the spirits
into good order again. And Cly-
sters have a singular virtue to paci-
fy the Spirits; and therefore are
very convenient in all convulsive
Motions: for what Fomentations
do, applied outwardly to the Bel-
ly, that they do inwardly, when
being poured into the Gut, they
enter their Pores, and some dissol-
ving particles expire, which tem-
per and attenuate the morbidick
Matter, and rid the fibres of it.
These Clysters may be made of
divers emollient, anodyne and ner-
vine herbs, and a Drachm or two
of Essence of Castor may be added;
to wit, of Marsh-mallow, Liquorice;
white Lilies, Leaves of Mallow,
Marsh-mallow, Pellitory of the Wall;
flowers of Chamomil, Elder, Meli-
lot, Seeds of Caraway, Bay-berries,
Juniper berries, &c. We commend
also antimonial Clysters, of which
before. As for Purgatives, we dis-
approve of them, because they ex-
asperate pain and hasten death, as
that Famous Physician *Wesferus* in
Ephemerid. Natura Curios. has ob-
served, as well as I. But Medi-
cines imbued with an anodyne Sul-
phur, and which have gentle pare-
gorick Particles in them, do stop
the anomalous influx of the Spirits
into the Membranaceous parts of
the lower Belly; and Opiates ex-
cel

cel all others : for Tincture of *opium* extracted with Alcohol of Urine, and transcolated several times, relieves to a miracle in desperate cases; and so does *laudanum opiatum*, made by Fermentation *Langelotti's* way. We have with good success used *essentia carminativa* mixt with *essentia anodyna*, *Wedelius* his way. I must needs commend this paregorick tincture of mine, which mixt with my anodyne tincture never failed me ;

Take of Spirit of Rosemary half an Ounce, Worms two Drachms, Harts-horn, volatil Salt of Amber, Vipers each one Scruple. Digest them together. The Dose twenty Drops twice a day, and let the Body always be disposed to Sweat.

And anodyne Essence will be good of three parts *laudanum opiatum*, and one of Balsam of Sulphur, sharpened with tartarified Spirit of Wine, and first prepared with *spiritus nitri dulcis*. There is great virtue also in our *theriaca Cœlestis*, if you give a few grains of it.

Among mineral Anodynes, Cinnabarines excel, being thorowly impregnated with fixt Sulphur of Antimony, especially Cinnabar fixt with Oyl of Vitriol, which is the true *Panacea Anwaldina*. Some love it prepared without an Acid. The Powder also gathered from the dross of *regulus* of Antimony at the last precipitation with Spirit of Vitriol, is famous. Also the anodyne Sulphur of Vitriol, made our way, eases Colick pains like a charm. We may reckon Treacle water among anodynes, which may be given either by it self, or mixt with other things.

To refresh the Spirits and fort the Nerves, we advise Acids, that are strong, of a sulphureous, volatil Salt, to bring the Spirits into order. All Balsamicks are good in case, especially our nervifacum, which by constant use, does wonders. Essence of Camphor and other spirituous tinctures, Elixirs, are of great effect against weakness of Spirits. Cordials must be given frequently in substance; Barly, Cinnamon, Pearl, of the Velvet of Scarcia, Orange flowers, *Danica rubra*, *ritus confortans cardamomi*, *confectio alhermes*, *pulvis camomes* and *cordialis preperius*, may be made up into Balaams, a prudent Physician. Acids are good, which have a spiritous volatil principle in them, as much as they check the effluvia of the Spirits, and their hasty Motion. But all Acid Spirits, the best is most volatil Spirit of Vitriol, is made of Vitriol of Mars impregnated with Spirit of Sal Ammoniac, distilled by a glass retort over an open Fire. And Spirit of Nitre deserves praise.

Antiscorbuticks also and Nephreticks must not be neglected, to put the morbid Matter into Motion, and carry it along with the urinary Passages, such as *qua antiscorbutica elcther horti*, as there shall be occasion, *Hertodi ex stercore columbæ*, of Sal Ammoniac simple and pound, *mixture de tribus*, Turpentine, *Sal volatile de Turpentine*, *vii* or *nostrum*, Powder of Camphor Pill, and other Balsamicks, help Solution of Continuity, correct a vitious Acid, Bal-

of Anodyne exceeds all the
thirty drops of it given
in *aqua lumbicorum ma-*
The virtue of this sol-
Balm is excellent;

of Balam of Peru, mix it with
of Sal Ammoniack and I-
and digest it gently.

of *cornu cervi succinatus*, and
Cunabarine, and cephalick
made of them, especially
with Opiates, are of great
All Antepilepticks and
seem to be of singular

in spasmodick Fits of the
Here also *aurum fulmi-*
from one Grain to
will do good. And it will
difficult for a prudent Phy-
to satisfy several indicati-
these Medicines. *Sperma*
not only temper Acids,
the membranous and
Fibres, and so eases Pain.

It must be taken with Oyl of
Almonds, Sack, or in warm
this Porion, Crato, who
Physician to three Emperors,
among his secret Medi-
When these things will do
good, they go to a Milk or
Diet. Or we send our Pa-

as to their last refuge, to
Waters, such as *Embsden* in
and *Bourbon* in France;
drinking whereof *Cite us* re-
several, who were grown
sick by an epidemical Co-
so great is Nature's bounty
us, and so admirable is the

Physick! We do not ex-
hot Baths, which have cu-
If we have them not
we may have them arti-
A Bath of fresh Water,
Oyl Olive is good. This

following is excellent;

Take of root of Marsh mallow, white
Lily, Flowers of Chamomil, Me-
lilot, Elder, leaves of Mallow,
Pellitory of the wall, Violets,
Buck-bean, Brook-lime each,
what you please. Mix them
for a Bath.

Externally a Bag of wheaten
Malt ground with Cummin, com-
mon Salt and Chamomil flowers,
will be good; such as this follow-
ing;

Take of ground Malt, Cummin
each two handfuls, flowers of
Chamomil, Mullen, Melilot
each half an Handful, seeds of
Cummin, berries of Juniper each
half an Ounce, Camphore (if
the patient can endure the smell)
one Drachm Mix them for
bags; and apply them hot.

Wooden trenchers made very
hot and wrapt in a Napkin, im-
pregnated with Oily things, and
so applied to the Belly, do often
give ease. But we must have a
care how we meddle with To-
picks: for they often do the pa-
tient mischief; because the saline
Recrements, being disturbed by
them, produce a more violent
Heat, yea an inflammation of the
Guts and Mesentery, which at
length ends in an Abscess; as
Wepfer found it, in a Body which
he opened.

We highly value nervine To-
picks mixt with Anodynes, which
have also a precipiating Virtue in
them, such as *aqua arthritica*, spi-
rit of Sal Ammoniack, Worms, li-
quor nervinus, Oyl of Soap, or
Frogs. Or;

Take of Oyntment of Marsh-mallow, *unguentum anodynum* each half an Ounce, Oyl of Worms two Drachms. Mix them for use.

Also we order *balsamus spasmodicus Mynsichti* to be applied to the back, with good Success. I may likewise recommend Aromatick Oyls, *spiritus convulsivus*, and other Carminatives, the *spina dorsi* may be anointed with *unguentum resumptivum* mixt with Bevers grease, &c. The following Liniment applied to the Belly eases the most violent Pain, to a miracle.

Take of Spirit of Ants, Worms, Lily conval, *spiritus arthriticus*, *spasmodicus* each one Ounce, volatile Salt of Hart's-horn one Drachm, Tincture of Castor three Drachms. Mix them.

The Belly may also be anoynted with Oyl of Sow-bread. Or ;

Take of Oyl of Chamomonds, Dill each one Ounce, destilled Oyl of Bay-berberaway, Cummin each half a Scruple, Essence of Saffron a Drachm. Mix them.

Oyl of Myrrh may be droped to the Navil. A Cataplasme may be made of Pellitory of the Cresses, and boyled Onions, Oyl of Scorpions.

Out of the Fit, for Prevention sake, the morbidick cause may be removed by Purging, Vomiting, and Bleeding. Afterwards using Martial Medicines, and to temper the great Heat given, such as the testaceous before mentioned, which remove the Acrimony, and Acidities of the Humors, Ivory, Calomel, Mother of Pearl, Harrow-tree, Whey with Tamarinds mixed with it, or mixt with Acidulous juices, may be drunk in the time.

C H A P. VII.

Of the Jaundice.

§. 1.

Most names of Diseases given by the Gracians, are received by the Latins. So the word *Jaundice* came from the Greek *χρῆμα*, from the yellow Feathers of the Wing of a Bird so called, which in Latine they call *Galbula*, in English a *Wood-wail*, which is probable, as *Amatus Lusitanus* Derivation, cent. 1. curat. 83. holds, that it should be called from *ἰσχυρὸν* a Kite, because Mens Eyes in a Jaundice turn'd yellow with Bile, like Kites. *Celsus*, *Apulejus* and *Scribonius* call it *aurigo* and *auriginosa* from the colour of Gold evidently, which Bile, when it over-spread the whole Body, makes the skin yellow; and so they call it *regius* from Gold, which is the King of Metals. Other call it *arcuatus* or *arcuatus*, from the various colours of the Rain-bow. In English it is called the *Jaundice*. It may be described to be, a *Caustic* tinging the solid and fluid parts with a preternatural Colour, yellow or black, arising from the Acrimony of the Bile.

§. 2. *A Case.*

A Young man, twenty five years of age, of a sanguine and colerick constitution, at other times troubled with Hypochondriack and Colick Pains, when in Summer time after meat he had exercised himself overmuch, and likewise all the Summer long he delighted in sugared things, and very Aromatick Wine, after he had passed some Nights without Sleep, he Found a dulness of Body, and an itching in his Skin, especially in his Back, his Stools were white, and somewhat slimy, he made a troubled, thick and Saffron coloured Urine, so that it tinged cloth and paper, the white of his Eyes, his Temples, and all his Skin turn'd yellow, he had a bitterness upon his Tongue, was Thirsty, his Sleep was disturbed, and if he stirred much, he had a difficulty in Breathing.

§. 3. *Part affected.*

When we say, the solid and fluid parts of the Body are its Subject, we do not exclude

the Spirits, those subtil Bodies (roo fall under the sense of Seeing) subtil, to from the Cause of the Subject. I name only those Parts, that are apt to take the depraved Colour, which we see are both solid and fluid. Among the external parts we may accuse the whole Skin for the part affected, whose Cuticle the thinner and more pellucid it is, as in white skinned persons, of a clearer yellow the Jaundice will appear; and the thicker, the darker. The *adnata tunica*, which makes up the white of the Eye, may also be here affected, and so may the Nails, Lips, and Hair, as *Schenkius obs.* l. 3. relates out of *cornelius Gemma*. Among internal parts affected, we reckon for the principal Subject the part which serves for the Secrecion, Collection, and Discharge of the Bile, namely, the Liver, Gall-bladder, Choledochal Duct and the Pancreas. *Zacchias* also *quest. medicolegal.* tom. *consil.* 15. observed the Lungs in this disease to be tinged with a citrine Colour. In a Man, forty years old, whom I opened at *Hanover*, I found not only all the viscera both in the Belly and Breast, but the very Brain, Bones and Cartilages tinged with an Icteric yellow Tincture. In opening other Bodies, that died of the Palsy, I have found sometimes Stones, sometimes viscid Phlegm, or some thing else in the biliary Passages, which stopped these Vessels.

§. 4. Diagnostick.

THe Diagnostick of a Jaundice in general may be taken, without more to do, from the Habitus of Body and Colour of the u-

rine, especially if you look at the white of the greater caruncle of the Eye, which is found first of all to be tinged yellow, a Singulis of Body always precedes, and is an Itching all over the Skin, specially in the Back, by reason of the Acrimony of the Bile that enters into the Pores of the Skin, mixt with the Serum. The colour rine between a yellow and almost black. And there are urines indeed in other Diseases, but here lies the difference: In Jaundice if a linen cloth be put in the urine, and then dried, it retains its yellow Colour; in other Diseases, if you dip it in the urine and dry it, the yellowness flies away with the moisture. Generally the Urine is turbid, and little in Quantity. Stools are whitish and hard, *album Grecum*; because the Gall is obstructed, by which the low Humor with the bile is carried to the Guts, and so the excrements are not tinged. The Urine is generally colicive, through defect of Salt contained in it, which used to vellicate the Guts, stimulate the Fibres to Excite. The whites of the Eyes and the whites of the Skin are yellow, because most of the volatil part is sublimed. The Mouth is bitter and thick. Appetite decayed, there is oppression at the Heart and in the right hypochondrium, the Head Sleep is troubled, the Hair falls, and the Breath is short. The special Signs of a black Jaundice said to be the Inclination of the Skin to a black, brown, or livid Colour, there is a heavy Swelling or a Pain after walking in the left hypochondrium, Sadness, Sloothfulness, &c.

Sleep, Fainting, Urine enclining to black, a costive Body, &c.

§. 5. Cause.

THE old Galenists say, the efficient Cause of this discolouring is either the abundance or depraved quality of the Bile, which diffuses it self either critically or symptomatically all over the body. The antecedent Causes with them are either a hot Intemperature of the Liver, in which too much Bile is bred, or a stoppage of the Choledochal Duct either by a too thick Bile, by phlegmatick Humors mixt with it, or by Stones, or whether it is, that these Ducts are compressed by the Humors of the adjoining parts, or that they are closed up, for want of Bile. They hold that the black Jaundice proceeds from black Bile or Melancholy; and therefore they blame the Spleen for breeding such a bad Humor, and they say, the proximate and conjunct Cause is the Effusion of Melancholy into the circumference of the Body. A cold and dry Intemperature of the whole Body, Liver, or Spleen or Inflammations and Apostems of the Spleen may breed or encrease Melancholy; and so may the frequent use of Melancholick things, the suppression of the Hemorrhoids, Neglect and Care, the turning of Blood or Bile into black juice, either by Adustion or Congelation.

§. 6.

Paracelsus lib. n. de iet. c. 1. endeavours utterly to overthrow the Galenical Pathology against their Opinion, who ascribe

this Disease to Bile, since neither Sickness nor Colour comes from Bile, and to make it out, he denies that the Gall gives the icteritious Tincture, because there is no Tincture in it, nor in the Spleen, and the Bile is in the Guts. For he holds, that Colours arise from the Mixture of Salts; as we see Painters make several Colours of the Mixture of several mineral Salts. Therefore, according to him, the yellow Jaundice consists of an entalick Vitriol, and liquid Sulphur; and the black of *Myssop* Vitriol and dissolved Sulphur. But these things are so obscure, that we shall proceed to things that are better understood.

§. 7.

Helmont, as well as his Master *Paracelsus*, denies that the Bile is amiss, but holds, that the Jaundice proceeds from some fault in the digestive Faculty; because the liquid excrement is carried upwards, which should be purged downwards. He makes the Cause to be an anodyne Poyson, and its Residence is from the *pylorus* to the end of the *duodenum*, it stops, and so the Stone and Jaundice turn the Blood into yellow Poyson. And this is often caused by Grief.

§. 8.

Millis thinks, the Cause of a Jaundice consists in this, that Bile, separated in the Liver is either not sufficiently, or not at all, carried to the Gall-bladder, because the Ways are obstructed, but must of Necessity regurgitate into the Mass of Blood; and so he questions not, but it arises from

the Obstruction of the cystick Passage and common Duct and sometimes the whole Blood is in fault, when Bile is bred too plentifully and quickly in the mass by reason of its over exalted, sulphureous, and saline fixt Particles; so that it cannot be discharged soon enough the ordinary Ways: Wherefore this, parting from the Blood with the serum, is fixt to the solid Parts, and gives them its Tincture. Which is the reason, that the Bite of a Viper, and abuse of strong Drink are apt to cause this Disease; and for the same reason he thinks that a Tertian Ague may easily terminate in this Disease.

§. 9.

Sylvius harps much upon the same string. He holds, that the Bile is hindered in its Motion to the Guts, by Obstruction of the Cholodochal Duct, or by a too viscid pancreatick Juice. He supposes also, the Bile is bred and detained too long in the cystis, and that sometimes it undergoes a notable Alteration, which makes it move more impetuously and abundantly towards the Mass of Blood; yet it mixes not with it so well as it used; but is only blended with it, and so is apt to separate again from it, and to dy and tinge the solid parts with its Colour. And he questions not, but sometimes a Jaundice may be caused by poysonous volatil Spirits, mixt with the Bile and Blood. He proves it by the biting of a Viper.

§. 10.

The Cartesians think, the Disease is bred, when the Bile sends in the Figure of its Particles and in Motion. Then a due quantity of it is not discharged into the Parts for Excrements, which lying long in the Blood, and circulating with it, and its Figure agreeing with the Pores of the parts, it tinges the Skin yellow and breeds the Jaundice. By this Choler they understand, acid, thin and gross Particles, which are in the same manner peccant,

§. 11.

We indeed, as most think, that in this Disease the Excretion of the Bile into the Guts is hindered, by the various Obstruction of the Liver and biliary Duct, and so it regurgitates, and is carried with the Blood all over the Body, and dyes it with a yellow Colour. But we likewise think, that there is some Viscosity in this yellow Humor, which not only causes obstructions in the vessels of the Liver and other parts, but through the habit of the body, and so this yellow humor stagnates there (otherwise the Yellow Humor would return by the lymphatick Vessels to the Blood, and would not overflow the Skin.) Nor is the Liver always affected with a hot intemperature, as is commonly thought: for this Disease depends upon the Obstruction, not only of the biliary Ducts, but of the Vessels of the whole Body, especially of the Skin; yet experience shows, that this Disease is bred in a very cold Intemperature.

we do not only throw the
 acardick Cause of a Jaundice
 on drinking Brandy or Strong
 Liqueurs, but upon drinking cold
 Liqueurs, and eating viscid and cold
 Food. Nevertheless we deny nor,
 that this Disease may be caused by a
 vitriol Salt, and the over Spiritu-
 ality of Fatness of the Bile. For
 sometimes the Blood is ill ferment-
 ed through the Bile's fault; if
 the Bile or its Sulphur be too much
 heated, corrupt or abundant, or
 its sharp lixivial Salt be dimi-
 nished or weakened, whereupon
 the Chyle cannot be well separa-
 ted from the Excrements of the
 Liver, nor be disposed in a due
 manner for future sanguification;
 and so (as the Saying is) a fault
 in the first Concoction is seldom
 corrected in the second. There-
 fore sharp and sulphureous, or poi-
 sonous Particles occasion a Jaun-
 dice; thus we see a Jaundice is
 caused by the bite of a Viper:
 when many such hot, sharp,
 sulphureous Particles are mixt
 with the Mass of Blood, much
 must arise from that Mixture,
 which cannot all be received by
 the Bladder, and then must needs
 exude into the Blood, and so
 be carried to all parts of the Body.
 Moreover I do not question, but
 that is a Conglomeration of the
 animal Spirits in the orbicular Fi-
 bers of the Gall-bladder, which by
 spasmodically contracting the
 Gall-bladder causes all the Bile to
 exude towards the *vena porta*
 into the Mass of Blood; and this
 may be done by an austere Humor
 hanging about the Orifice of the
 Gall-bladder; nor do we exclude
 Stones, Worms, &c. When the
 Skin is dyed of a Blackish Yellow,
 it is a Sign of the black Jaundice,

in which case I suspect there is a
 fixt vitriolick Bile, which is able
 not only to tinge the Skin, but the
 whole body.

§. 12. Prognostick.

NOW we will go to the Progno-
 stick. And hither belong
 the following Aphorisms of Hippo-
 crates §. 4. aph. 62. *Those who in
 Fevers have the Jaundice come be-
 fore the seventh day, it is bad, be-
 cause the viscosity is greater.* Al-
 so §. 4. aph. 64. *They who in Fevers
 have the jaundice come on the seventh
 day, or the ninth, or the ele-
 venth, or the fourteenth, it is good,
 unless the right hypochondrium be
 hard, otherwise it is not good;* be-
 cause the peccant Matter is expel-
 led by violent crises, which scarce
 happens in our cold Countries. He
 says also §. 6. aph. 42. *For such as are
 ill of the Jaundice, to have their Li-
 ver hard it is bad;* because the
 Disease then is fixt and great. A
 Jaundice, that is critical, goes a-
 way of it self, and so does that
 which is caused by the biting of ve-
 nomous Beasts. But it is hard to
 cure one caused by a calculous or
 carnosus Obstruction either of the
 biliary Ducts or the *porus bilarius*
 in the Gut. It is exceeding diffi-
 cult to cure one, that is loose in
 his Belly, or when the Disease is
 inveterate, or has grievous Disea-
 ses or Symptoms joyned with it,
 especially in Women with Child
 and old Men, or when it proceeds
 from an Inflammation, or Scirrhus
 of the Liver; or, as it was said,
 when it comes in Fevers before
 the critical day, especially if it ap-
 pear without a cold Fit: for then
 it signifies some grievous Disease
 is bred in the Liver; and so it
 threatens

threatens other grievous Diseases, as the Dropsie, Cachexy, Consumption, and the like. The Jaundice is often mortal, if it proceed from a cold Cause, sometime also the lacteal Vessels are obstructed thereby, and then Patients die of a lingering Consumption. Now to the Cure, and first to the Dietetick.

§. 13. Dietetick Cure.

AMong the six non-natural things, the *Air*, since we cannot live a Moment without it, must be exactly observed, that it be temperate: we disapprove of a cold one; for Cold renders the Bile more Viscous, and so makes the Obstruction pertinacious. For the Air getting into the Fibres of the Lungs, and protracted for the Evaporation of the Heart, and creeping thence by latent Passages all over the Body, may do Violence to it.

The Patient must also use a sound Diet and ease of Digestion; let his Meat be seasoned with Capers, Endive, Parsly Root and other opening and inciding Herbs and Roots. Let him forbear all Meats that abound with Phlegm, such as are all that are viscous, Fish, Pulse, Summer Fruits, &c. and such as are apt to turn to Bile, especially such as have Honey, Sugar or Spice in them, and spirituous things, such as Brandy, &c. for these things fire the Blood and Bile the more. According to *Horace Ser. 2. vers. 2.*

*Dulcia se in bilem vertent, stomachoque tumultum
Lenta feret pituita.*

Gluttony is hurtful: in Disturbance of the Spirit, and Fluctuation of the Viscera, immoderate eating encreaseth a Man is never himself, it is dy be over crammed. The Patient may drink some aperient decoction, or Physick Ale, and then take a Glass of good Wine.

He must neither eat nor drink too much.

He must sleep in the Night and wake in the Day.

He must go to Stool either naturally or artificially.

The Passions of the Mind must be moderate, especially Anger, Grief, which, as *Helmontius* holds, hinders the Digestion not only of the Stomach, but also of the Liver.

§. 14. Pharmaceutick Cure.

NOW we will proceed to the Cure for whose sake all the things were premised, and that is the Pharmaceutick Cure. The first of all the Galenical Medicines was this. Since they accuse the Obstruction of the Passages of the Vessels, by which Bile, as they say, is carried out of the Liver and Spleen into the Guts, and it is thought that the Liver thereby grows hot, and abundance of Bile is gathered, therefore they give Clyster: for the Patients generally are costive, because the Bile does not descend, which does irritate the Guts. They also render the Humors, that produce gross Obstructions, obedient to Nature by Inciding and opening Medicines, such as Root of Geopium, an Parsly, *Asarum*, Fenil, Lemon of Fumitory, Ground pine, Sassa-rel, also Waters of Agrimony, &c.

Dodder, Fenil, Cichory, En-
 and Decoctions made of these
 but I have no mind to give
 any Receipts of them, because
 you may meet with them any
 where. Afterwards they carry off
 the prepared Humor by evacuating
 Medicines, such as Eleſtuary of
 Juice of Roſes, *diaprunum ſolutivum*,
Tamarinds, *pilula de rhabarbaro*,
Manna, *Caffia* and other Cholago-
 ges. But if black Bile be pec-
 cat, they betake themſelves to
 ſtronger things, namely Melanago-
 ges, of which they make all man-
 ner of Medicines, Infuſions, De-
 coctions, Powders, &c. according
 to the Indication of the Diſeaſe,
 the Intention of the Phyſician, and
 the Patient's Pleaſure and Cuſtom,
 admitting alſo of Vomits when
 there is Occaſion. After all they
 commend Diureticks and Diapho-
 reticks, given in due time and
 manner.

Among Specificks *Capivaccius*
 commends an Infuſion of filings of
 Steel. *Galen* gives *Asparagus* to
 People in a Jaundice. *Atius* gives
 earth Worms dried in an Oven
 powdered with Myrrh and other
 appropriate Medicines and he
 writes that ſo the Jaundice is the
 next day carried off by Urine.
 ſome commend a Wolf's Liver for
 a Specifick.

Among Corroboraters they reckon
ſpecies diacarcumæ, *dialacca*, *dia-*
rium ſantalum, *diarrhodon Abbatis*,
Treacle, *Mithridate*, Whey of
 Goat's Milk, a Decoction of Hore-
 hound, red Vetches, &c. the Dung
 of a Dog and a Goſe. If it be the
 black jaundice the Ancients com-
 mend the vulgar Spleneticks as
 good Aperients,

§. 15.

Paracelfus ſays, corrected
 Rhubarb is a moſt excellent
 Remedy for the Jaundice; and he
 corrects it with Oyl of Sweet Al-
 monds. He writes *lib. de prep.* 1.
 that all Excrements and Dungs
 cure the Jaundice. In *lib. de ther-*
mis he commends *Sal gemm* and
 Tin for the Cure of this Diſeaſe.
 He ſays that all things which cure
 the Jaundice come from *Mercurius*
Veneris. He ſays Juniper Berries
 and black Cherry Water are good
 in the Jaundice. *l. de Iſtero c.* 3.
 He magnifies a Lizard ſowed in a
 Bag and a Spider, for curing a Fe-
 ver and Jaundice. He writes like-
 wiſe that Horſes Dung, made hot
 and given the Patient, cures a Jaun-
 dice, and ſo does ones Urine put in
 a Bladder and hung nine Days in
 the Smoak.

The modern Hermeticks Com-
 mend Spirit of Vitriol, Salt, Tar-
 tar, with Saffron. *crolius* com-
 mends Oyl of Amber, *baſil. chym. p.*
 193. given in Water of Endive,
 Dodder, Cichory, or Celandine.
 They reckon up ſeveral Specificks,
 We ſhall only ſlightly mention the
 chiefſt of them, and they are Ce-
 landine, Root of Turmeric, Rhu-
 barb, Saffron, the yellow Stone
 found in the Gall of an Ox, Root
 of *Anchuſa*, the yellow Skin of
 Hens Gizzards and Feet, the Pa-
 tient's Urine drunk with Juice of
 Horehound, Earth-worms, Dogs
 Dung and Goſe Dung eſpecially if
 ſhe be ſed with Celandine, Goat's
 and Horſe Dung, the Aſhes of Spar-
 rows Feathers, the Brain of a Par-
 tridge, Lice, Buggs, Beetles, a Tench
 applied alive to the Navil. till it
 dies, and ſome of them ſow a live
 Lizard

Lizard in Cotton Cloth, and hang it about their Neck, and so they do with a live Spider.

§. 16.

According to *Helmont* any thing cures a Jaundice, which extinguishes that Poyson, which changes the Blood yellow; all *Alkalies* are Antidotes, as are *Millepedes*, Worms, Lice and other Insects, inasmuch as they destroy the Poyson that alienates the foresaid Faculties. Not that those Worms or Simples presently open the Gall-bladder. Nor can we imagine that a bite or sting in the Skin can presently shut the passage of the Gall into the *intestinum jejunum*. But the virulence does so disaffect the *pylorus*, that the digestive and distributive Faculty is presently alienated; and therefore it is, that one bitten with a *Viper* turns presently Ittrick. Wherefore according to our Author the Jaundice is cured by applying Flowers of Corn-Marigold, Dandelion and several such things, and frequently by some Antidotes that are agreeable to the *pylorus*. And Rhubarb, Saffron, Turmeric, and Dock do not cure because they are Yellow, but inasmuch as they are good for the detersion of the Poyson. He cries up Salt of Urine, as the highest and most approved Medicine for curing the Jaundice. So likewise a Pike Fish applied alive to the Stomach kills the Poyson.

§. 17.

Utilis his Cure of this Disease is performed by an exact method, which proceeds according to three Indications. 1. To

remove the Obstructions of the Ducts or *porus biliaris*, or *choledochal* Passages, or *choledochal* Vessels. 2. To reduce the Blood to a temper, that it breed not bile beyond measure, or make it unfit for Secretion. 3. To preserve Secretion and help the Symptoms. To the first he may satisfy the first Indication, he prescribes Purgatives, by which the descent of the Bile may be irritated towards the Intestines, and the obstructed Vessels may be cleared; to which end he advises *Vomits*, that is, while the tone of the *viscera* and the Strength are good; for by these the loaded Stomach is eased of much viscous Phlegm, and likewise by irritating the *choledochal* Vessels and violently flushing all the hepatic Ducts, they clear their Obstructions, and so the Bile endeavours its passage by the usual Ways. Among these *Vomits* he highly values *crocus metallorum* with Wine or *Oxymel* of Squills, or Powder of *asarum* half a Drachm with *fecula Ari* and *tartarum vitriolatum*, or *gum gutta* eight Grains with *tartarum vitriolatum* in Grains.

Among Purgers he prefers before all others half an Ounce of the Electuary of Juice of Roses, or half a Drachm of Rhubarb with Salt of Wormwood and Cream of Tartar each half a Scruple. If you have a Mind to an Infusion or Apozem, you may consult the Author. He also gives the following Powder;

Take of the best Rhubarb from half a Drachm to a Drachm, Salt of Wormwood one Scruple. Mix them. Make a Powder,

These things premised, the Author passes to Deopillatives and Specificks, which are either Diureticks or Diaphoreticks, inasmuch, as such Medicines promote the Secretion of the Bile from the Blood, and when it is separated, urge its passage through the Ducts of the Liver, and discharge the bilious recrements by Sweat and Urine, such as Tincture of Antimony or *Elixir proprietatis* itself an Ounce, giving twenty Drops at a time. *Mixtura simplex* and Salt of Tartar are proper. This excellent Author cries up the Virtue of Gesner's *antiiste* in this Disease;

Take of the Root of large Nettle one Pound, Saffron one Scruple. Bruise them well, and extract the Tincture with white Wine. The Dose is four Ounces in the Morning for four Days.

He highly values also this following of *Jole's*;

Take of the Root of greater Celandine sliced two handfuls, Juniper berries one handful. Bruise them, and pour a pint of Rhenish Wine to them. Draw the Juice. The Dose four Ounces twice a Day.

I find the following Pills approved by the Author;

Take of Powder of Turmeric, Rhubarb each one Drachm and an half, middle kind of Capers, Root of *asarum* each half a Drachm, extract of Gentian, lesser Centaury each one Drachm and an half, Salt of Wormwood half an Ounce, Seed of Cresses

half a Drachm, Rocket half a Scruple, *elixir proprietatis* half an Ounce, gum Ammoniac dissolved in *aqua lumbricorum* what is sufficient. Make a mass for Pills, and let it be made into small ones. The Dose half a Drachm Morning and Evening.

Among Specificks and things appropriate to this Disease he commends Earthworms, Goose and Sheeps Dung, Millepedes either in form of a Powder, or squeezed out with Celandine water, and this expressed Juice may be drank twice a day for a Week. And by reason of their Volatil Salt he cries up the vulgar and empirical Remedy, to wit, nine live Lice. And for the same reason he commends flowers of Sal Ammoniac, Salt of Amber, Harts-horn, Soot, Spirit of Harts-horn tinged with Saffron from fifteen Drops to twenty. He holds that Chalybeates and Spaw waters do good.

Among Externals and Sympatheticks he extols a live Tench applied to the Itterick's right *hypochondrium*, or to the Soles of his Feet. He has also known this Disease, when inveterate and deaf to other Remedies, has been cured by the secret way following;

Take of new made Urine of the Itterick Person, all that he makes at one time, ashes of Ashen wood sifted a sufficient quantity. Mix them and reduce them to a Mass, which must be made into three Balls of equal bigness, and set in a warm place near a Fire or Stove: As these Balls grow hard, the Jaundice wasts away.

He

He commends the following mixture for a Cordial.

Take of *aqua mirabilis* eight Ounces, *Lumbricorum* four Ounces, Syrup of Orange Pill one Ounce.

If Pain is violent, he flies to Anodynes,

§. 18.

Sylvius thinks the Cure of the Disease consists in this; that the remote causes be avoided, to wit, grief of mind, excess in strong Wines or Brandy. One must shun, as he would Poyson, whatever alters and viciates the Bile, that is, the viperine matter must be corrected, and brought into the Guts: also the viscid Phlegm, that obstructs the Choledochal Duct, must be incided and carried off: for inciding whereof all Aromaticks and Volatil Salts are proper; and for carrying it off, divers Purgatives, Rhubarb, &c. but he says the following Decoction exceeds them all;

Take of Root of Mather, greater Celandine, Parsly each half an Ounce, Flowers of Broom half an handful, Seed of Columbine, Parsly, Anise each two Drachms, crude Tartar a Drachm and an half. Boyl them in white Wine and fair Water each what is sufficient. Dissolve in the Colature of Syrup of Diacnicum, of Cichory with Rhubarb each one Ounce and an half. Mix them.

Let the Patient take twice or thrice a Day as much of this Apozem as will give him two or three

Stools in a day, and so make void the Bile with the Phlegm this Disease had its rise from Poyson of the Viper, Salts abounding with a volatil Salt proper, such as *Andromachus* (commonly called Venice) Treacle, chifces of Vipers, *antimonium reticum*, *bezoarticum minerale*, &c.

The Author's Empirical Specifick Remedies are Hemp boyled in Cows Milk till it is and strained: let the Patient take five Ounces of this Decoction three or four times a day. Also a Decoction of Venice Soap dissolved in Milk and sweetned with a little Sugar, given twice a day. He gives a great encomium to Tincture of Iron made with a volatil Spirit, values *opium* it self, as a powerful Conqueror of the animal Spirit, and as it is oily and fat; for it does not question but fix and coagulate things do bind the animal Spirit, and Cure the Jaundice; and he confirms this by fixt and volatile Sulphurs of Minerals and Metals, their gently fixing and appealing volatile Spirits. For taking away the yellowness of the Skin he commends the following mixture;

Take of Water of Grass, White wood each two Ounces, Tincture of Saffron, Spirit of Ammoniack each half a Drachm, *bezoarticum minerale* one Scruple, *laudanum opiatum* three Grains, Syrup of Fenil one Ounce. Mix them. Give a Spoonfull of it often.

If the Patient sweat, the Cure may the sooner be expected; but if much red Matter be voided in Urine, and a little after it will prove flower.

§. 19.

and the Cartesians proceed in this Method. At the beginning we do not apply any of Purgatives; and Rhubarb or Senna must not be boyled, for they would have them; but the Purgative Virtue is rather to expel out of them by Infusion, where the Particles are fetcht out, and after purging bind the Bowels again, which may prove very convenient and prejudicial. The following Apozem therefore will be useful, with which I always begin the Cure;

Take of Dandelion, the greater Celandine each one Ounce, Leaves of Cichory, Straw-berry each one Ounce and an half, Horehound half an Handful, white Tartar, Leaves of Senna three Drachms. Infuse them in Wine and Water equal parts. Boyl them to a Quart. And strain the Decoction. Or,

Take of Leaves of Horehound, Dodder, greater Celandine, Southernwood, Goose-grass, Flowers of St. John's wort, Columbine each half an Handful, Turmeric three Drachms, monks Rhubarb two Ounces, Leaves of Senna one Ounce, Cream of Tartar three Drachms, Root of greater Celandine one Ounce. Make a Bag. Or,

Take of Wood of Sassafras half an Ounce, Guajacum rasped, the Bark of the same each five Drachms, China seven Drachms, Sassaaparilla ten Drachms, scraped Liquorice three Drachms, Root of greater Celandine one

Ounce, Turmeric half an Ounce, Leaves of greater Celandine two Handfuls, Vervein, Betony, Bawm each half an Handful, the whitest crude Tartar half an Ounce, seed of Anise two Drachms, Hemp five Drachms, Fenil one Drachm. Make a warm Infusion for a Night or more in a double Vessel well stoppt, and in a sufficient quantity of Rhenish Wine make a gentle Decoction. To one quart of the Colature add of Honey of Squills one Ounce and an half, Salt of Wormwood one Drachm, Spirit of Sal Ammoniack one Drachm, *aqua vitae Matthioli* an Ounce and half. Mix them. Make an Apozem.

By this we may very well incide gross Humors, that stop any Passages, and carry them off, since Phlegmarick Humors cannot conveniently be carried off without previous preparation. A Decoction of opening Herbs and Roots, such as the greater Celandine, especially if Goose Dung be added, is very effectual in this case; here follows a Composition;

Take of Root of Cichory, greater Celandine, Mather each three Drachms, Leaves of Celandine, Dandelion, Ground pine, Agrimony each half an Handful, seeds of Anise, *daucus*, Caraway each one Drachm, Goose Dung gathered in the Spring time, Sheeps Dung each half an Ounce. Boyl them in a sufficient quantity of Water to half a Pint. In the Colature dissolve of Syrup of Cichory with Rhubarb half an Ounce. Mix them. Or,

Take of Straw-berry Leaves with the Roots three Handfuls, Currans

rans three Ounces. Boyl them in a sufficient quantity of fair Water. Make a Potion.

Or the Patient may make an Infusion of Celandine in Wine, and drink a draught every Morning. When the Patient has taken some of these things, he may be purged in manner following ;

Take of *Electuarium diacatholicon cum succo rosarum* one Drachm and an half, choice Rhubarb, from half to a whole Drachm, *Mercurius dulcis* fix Grains. Mix them. Make an Electuary. Or,

Take of our Tincture of Rhubarb made with Salt of Tartar, Endive and Cichory Water, and give of it from half to a whole Ounce.

And because I have often found Aloeticks do good, the following Pills may be given ;

Take of extract of Aloes twelve Grains, Resin of Scammony three Grains, *Mercurius dulcis* ten Grains, Oyl of Mace one Drop. Mix them. Make Pills. Or in form of a Powder ;

Take of *pulvis laxativus* one Scruple, Magistery of Jalap, Scammony each three Grains, Cream of Tartar ten Grains. Mix them. Make a Powder.

And Clysters made of Aperients are good to open the Choledochal Duct. If viscid Bile be lodged in the Stomach it will be the safest way to give a Vomit, and Diaphoreticks with it, that we may kill two Birds with one Stone ;

Take of *tartarum emeticum* three Grains, Diaphoreticks many six Grains, Salt of wood two Grains. Mix them.

Finally all things are good are digestive in the Blood, as *tartarus nitratus*, precious Pearl, Crabs Eyes, especially if there be any austerity in the Bile. Then some Steel may be given, such as the following Electuary ;

Take of prepared Steel one Ounce, Salt of Wormwood a Drachm, with Syrup of Marsh-mallice and Cichory each sufficient. Make an Electuary. The Patient may take a Spoonfull of this Electuary every Day twelve or fifteen Days.

Take of Tincture of Columbine flowers, *spiritus aperitivus* equal parts. Mix them.

But if there be no other these things would not be so proper ; but then the Obstruction should be cleared by convulsives, for which end I communicate the following Specifick Secret ;

Take of Goose Dung gathered in Spring time and dried in Sun, Chicken Dung each a Drachm, *Lapis fulminans* a Drachm, Salt of Wormwood two Scruples, Powder of Camomile one Scruple, Sugar a Drachm and an half. Mix them. Make a fine Powder. Divide into four equal parts ; let the Patient take it every Morning fasting, having premised the

I have seen the Jaundice
perfectly Cured by it. Or ;

the Skin of the Gizzard
and Feet of a Hen and a Goose
one Drachm, Volatil Salt of U-
rine, Worms, greater Celandine
each one Scruple. Mix them.
Make a Powder.

Dungs also are good, Sheep's,
Goats, Dogs and Horses in-
died or boyled in Wine : for the
excrements of these Animals are
wholly nitro-sulphureous ; where-
by they have an admirable incid-
uating and dissolving fa-
culty ; and they retain the virtues
of the Simples, on which these A-
nimals feed, which by concoction
in the Stomachs of these Creatures
are turned into a kind of quintes-
sence : and therefore they are so
effectual in the Cure of several Di-
scases.

The Salt also of the *caput mor-*
tuum of Virriol exalted by iterated
Cohobations, Spirits and Salts of
Urine and Sal Ammoniack are ex-
cellent Deobstruents. We magnifie
the volatil Salt of Worms, Sows,
&c.

The acid Spirit of Sal Ammoni-
ack and Mars have an admirable
Virtue against this Disease. These
two Spirits combined may be
dropt into the ordinary drink, so
the Acidity can scarce be dis-
cerned ; by this Remedy alone I
have cured several. Volatil Salt of
Tartar, *residua tartari antimoniatæ*,
common Spirit of Salt, *spiritus ape-*
ritivus Penoti, crocus Martis aperiti-
vus &c. are Specificks.

And fixt Diaphoreticks are pro-
per, if they have also an opening
faculty, and either subtilise and
make or soak up the Mucilage of

the Humors, which thing tartare-
ous, saline and antimonial Medi-
cines are able to do. *Mindererus*
commends half a Drachm of Pow-
der of Sow-bread in mulled Wine.
We also recommend Diureticks in
this Disease, as having absterfivè
Salts in them, that correct the
Visciditè of the Bile, and carry it
off by Urine : for in isterick Urines
beside the yellow Tincture we see
abundance of Contents, which re-
quire to be carried off. Where-
fore when once there is an alterati-
on in the Colour and the tartareous
Contents, we may reckon the Di-
sease is in the Declension. Here are
some Receipts ;

Tincture of Saffron made with vo-
latil Spirit of Urine about fif-
teen or twenty Drops is an ex-
cellent Medicine. Or ;

Take of Spirit of Tartar, Sal Am-
moniack each one Scruple, *anti-*
monium diaphoreticum half a Scr-
uple, Rob of Elder one Drachm,
Water of greater Celandine one
Ounce, Cinnamon half an Ounce.
Mix them. Make a Potion.
Or ;

Take of *antimonium diaphoreticum*,
martiale half a Scruple at a time.
Or ;

Take of Salt of Urine half a Scr-
uple, volatil Salt of Amber five
Grains, Crab's Eyes half a
Drachm. Mix them. Make a
Powder for one Dose.

Among other things these are
good, *spiritus Penoti aperitivus, li-*
quor spleneticus Schroderi, arcanum
Tartari, &c.

Sometimes this Disease follows Fevers, and it signifies there are Obstructions, which when they come upon Fevers, must needs be bad; yet sometimes it is critical in Fevers, and then it is not so bad. Roots of Cichory with Currans, eaten instead of Lettuce at Supper are good.

There is nothing better for the Stomach in this Disease, than the fat of a Dog or a Viper distilled, which has often done good, when all things else signified nothing. But if there be any Suspicion, that the Jaundice proceeds from a Conglomeration of the animal Spirits at the Gall bladder which strains and spasmodically affects it. To this end Cinnabarines will be good, especially half a Scruple of our *cinnabaris solaris* with six Grains of Sal Ammoniack. Also *balsamus nervinus*, Spirit of Sal Ammoniack tinged with Saffron, *liquor cornu cervi succinatus*, and other Nervines will be very good.

If there be swooning and the strength much decayed, the following mixture will be proper;

Take of Water of lesser Centaury, Fumitory, Strawberry, Pearl each one Ounce, Cinnamon six Drachms, Shavings of Ivory prepared, Harts-horn prepared, Tincture of Saffron each one Scruple, *spiritus salis dulcis* half a Scruple, Syrup of Cinnamon six Drachms. Mix them. This mixture must be taken a Spoonful at once.

As for Externals I have so often been deceived by them, I shall not so much as mention them. Only among the magnetick Cures I have several times experienced this fol-

lowing, for which I could not yet imagine a reason; Let the patient piss in some brass Vessel, the Urine three days, then lay over the Fire, and when it is boiled, pour it into running water, and standing.

The black Jaundice being a sperate Disease requires the proper Medicines. At the beginning the following antiisterick Decoction the famous *Wedelius* is proper;

Take of the five opening Mather, Cichory each an Ounce, Drachms, Leaves of Agnus-castus noble Liver-wort, Stramonium Fumitory, Horehound, lesser Centaury, Wormwood each an Handful, Flowers of St. John's wort two Pugils, yellow Roshers one Drachm, Saffron half a Drachm, Cinnamon one Drachm. Boyl them in Water and Wine as much as is sufficient.

Also with *Forellus* his Bag I have cured a Maid successfully of this Disease;

Take of Root of Mather, Rhubarb, greater Celandine each an Ounce, Rhubarb, Turmeric each two Drachms, *radix eupatorio* one Drachm, Saffron one Scruple, Leaves of Strawberry, Horehound each an Handful, Schoenanth half a Drachm. Cut them, and put them in a Bag for a measure of Wine.

She likewise took the following Mixture;

Take of *aqua polychresta*, *aqua hepatica* *Mysichii* each four Ounces, Cinnamon half an Ounce.

Essence of the greater Celandine two Drachms, *Spiritus salis ammoniaci anisatus* one Scruple, *Propolis de duabus radicibus* two Ounces. Mix them.

And here all sharp volatil Salts are proper, whereby the corrupt and excessive Oyliness of the Bile is taken off, and on the contrary the dull and pontick Salt is sharpened, and the Acidity of the Pancreatic Juice is corrected. Beside the saline Spirits tempered with other things are proper, such as the Essence of Urine or Worms mixt with the Essence of greater Celandine, Southernwood, lesser Centaury, Turmeric and Dandelion; the decoction also of Wheaten or Ryebard is good to restore a due Crassitude and mixture to the Blood, when it is spoiled. They say, that *Lapis lazuli* and the cast skins of serpents are Specificks in this Disease, perhaps because they imbibe the Acid, that lies in the first stage. Martial Medicines are good: *Pulvis Langianus*, so much recommended by *Simon Pauli*, will be proper.

Decoction of Filings of Steel one drachm and an half, Seed of Cloumbine one Scruple, Powder of Earth-worms half a Drachm. Mix them. Make a Powder.

All bitter things and Spleneticks are of great virtue in this Case. Also to recover the Crasis of the Blood the following distilled Antipneumatick Water may be prescribed;

Decoction of root of Alkanet, Mather, greater Celandine, Turmeric, Clove, sharp pointed Dock, A-

Asparagus each half an Ounce, Leaves of Agrimony, German-der, Strawberry, noble Liverwort, Flowers of Marigold, Broom, St. John's-wort, lesser Centaury each one handful, the yellow inner rind of Berberries, Tamarisk each half an Ounce, Ivy berries one Drachms and an half, Earth-worms, *Millepedes*, May Beetles each three drachms, Goose and Hens dung gathered in the Spring each six Drachms, Saffron half an Ounce, Infuse them in Wine and Water of the greater Celandine each one pint. After four days destil them according to art in Glass Organs. Let the Patient take three Spoonfuls of this Water in the Morning, and at four in the Afternoon every day. Or;

Take of root of Alkanet, Mather, Smallage, Bitter-sweet, sharp pointed Dock, greater Nettle, *Asparagus*, Turmeric, greater Celandine, Leaves of Agrimony, lesser Centaury, Maidenhair, *Carradus benedictus*, Germander, Strawberry, Dodder, Flowers of yellow Ox eye, Marigold, Columbine, St. John's-wort, middle rind of Berberry, Elder, Tincture of Rhubarb, Rhapontick, Filings of Steel, Earth-worms prepared. Infuse them in Water of Southernwood, Dodder, Endive, and Wine. Destil them. This Water, for its egregious and appropriate virtues, may be called *aqua cystica*.

When these things will not do, you may go to the Mineral Waters. These are Empirical Medicines.

Three drops of the Gall of an Hyena taken in greater Celandine Water

Water is cried up by the Greeks
as a never failing Medicine.

The Heart also of a Wren eaten,
is said to cure the Jaundice.

A Drachm of the Powder of a
Parrot taken, cures any Jaundice.
So likewise it is remarkable, that
the Liver of a Sea Tortoise bruised

with Water of greater Celander
and drunk, cures the Jaundice.

The following experiment will
scarce ever fail you. Put the Pa-
tient's Urine in a Pot, cover it with
a Tile, boyl it half away, and take
it in Horse Dung.

CHAP

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CHAP. IX.

Of the Dropsy.

§. I.

The Dropsy is called *hydrops*, *hydropisis*, *aqua intercus*, and by Celsus *morbus hydropicus*. Paracelsus calls it *ros humidus*, and *sal* or *liquor resolutus*, to distinguish it from simple usual Water. The Dropsie in general denotes a serous gathering; if in the Head, it is called *hydrocephalus*; if in the Breast, *hydrops pectoris*; if in the Belly, *ascites*; if in the Cod, *hernia aquosa*; if in the Womb, *hydrops uteri*; if in the whole Habit of the Body, *anasarca* and *leucophlegmatia*; if the Belly be swollen with Wind, and found like a Drum, it is called *tympanitis*.

But here we shall consider three sorts principally, viz. an *ascites*, an *anasarca* or *leucophlegmatia* and a Tympany. And we will begin with an *ascites*, in which a serous matter gathered in the *abdomen*, and contained either in the *hydatides* or in the *omentum*, *peritonæum* and Muscles of the *abdomen*, strangely distends it, and sometimes the *scrota*, or the *pubes*, *Thighs*, and *Legs*; wherefore it is called *ascites* or *uricularis*, because the Belly is like a Bouget filled with Water.

A Dropsie in general is defined to be, A swelling of the whole Body, but generally of the *Abdomen*, with a Collection of watry or flatulent Matter.

§. 2. Part affected.

The Ancients, some of them took the Liver, others the Mesentery, some the Spleen, for the part affected. Some of the moderns take it to be the *intestinum jejunum* and its lateral Veins: We blame the whole Body, the *genus venosum*, & *neruosum* especially. But we think, that for the most part the *Omentum* is affected in this Disease, and its Vessels are broke; and so all potent Matter returns into the Cavity of the *Abdomen*: for it is my opinion, that all potent things pass through the *omentum* to the Kidneys. Therefore such creatures as have no *omentum* make no Urine, as Birds; Fish, &c. Besides all hydropical People upon dissection are found to have their *omenta* rotten, or torn or full of swellings. At Hanover one wedding, an Herniormist, cut a *hernia omentalis* out, but cut a great part of the *omentum* with it: and the Patient complains of a

Great Difficulty of Urine; if he drink much, he has a pain at his Stomach, and is always loose. Which makes me think, that some of the Vessels which carried the Urine straight to the emulgents, were cut off: therefore all that is potent passes to the *duodenum*, and there hinders Fermentation of the Meat, and makes the Fibres lax. And there is something more, which makes it very probable that all that is potent, passes not by the Guts into the lacteal Veins, and by the thoracick Duct to the Heart; because the *pylorus* of the Stomach is turn'd upwards, that no potent Matter may run out. Surely therefore potent things go to the bottom of the Stomach, and parts where it is joyned to the *omentum*: and if its Vessels be broke or swelled, the Potent Matter must of necessity fall into the Cavity of the *abdomen*, and cause a Dropsie.

I make no question likewise, but when the Spirits do not well irradiate those parts, and open the Pores of the Stomach, a dropsie may arise.

§. 3. Diagnostick.

AN *Ascites* is easily known: for in it the *abdomen* is very much swollen, and daily encreases, especially after eating and drinking plentifully. I have observed the Swelling to encrease and decrease with the Moon. Usually the *pubes*, Thighs, and Legs swell in both Sexes, and in Men the *scrotum*, by the natural bursting of which I saw a Souldier cured, who voided above forty Pints of Water. When they turn themselves in Bed they sometimes, tho not always, find a Fluctuation from one side to the o-

ther. There is Difficulty of Breathing, because the Diaphragm can not play. Their Body waste and grows thin. They have always cough, sometimes dry and sometimes moist: for now and then the water gets to the Lungs. Sometimes there is a slow hectic Fever, because the Blood being robbed of its *serum*, and not diluted with new Chyle, grows thick, rough and acid. Their Urine is generally red, with a thick Sediment, their Face looks yellow as if they were in a Jaundice. *Franciscus de Porta* does elegantly sum up all the Signs, *de sign. morb. l. 3. c. 12.*

*Hydropum fœdus color argus,
& tumor ingens,
Et sitis, & dyspnœa, cibus et
versa cupido,
Occupat & varias inflatio tum
gida sides.*

Sometimes, though not always, the appetite is lost, there is Nausea, Vomiting, Looseness, running Ulcers in the Legs and Arms. They are insatiably thirsty, and the more for drinking. For,

*Quò plus sunt pota, plus sitiunt
tar aqua.*

§. 4.

AN *anasarca* or *leucophlegma* is known by a lax Swelling of the whole Body, which is white and usually pale and the Limbs pit. Patients are not always thirsty as in an *ascites*. It is easier to be cured than an *ascites*. In a Tympany the Face does not recede so far from its natural State, here the Swelling of the *abdomen* with Wind especially con-

in the Guts, and with extravasated serum, is so great, that when the Belly is hit, it sounds like a Drum. For a Tympany seldom goes alone, but has Ordinarily an *ascites* attending it; though there may be a Tympany alone, as Experience lately taught me in a Girl of nine years old, in whom there was not one drop of water or serum in the abdomen, but both the abdomen and Guts were distended, and gave a plain sound. But three Symptoms do always attend this Disease, Shortness of Breath, Paucity of Urine, and violent Thirst.

§. 5. Cause.

According to the Galenists, the proximate immediate efficient Cause, is Matter not fit for Nutrition, which is serous pituitous or flatulent, gathered in the Cavity of the lowest Belly, or between the Skin and Flesh, by its abundance distending the parts of the Body. The Propinquous antecedent Cause is the frustration of Sanguification proceeding from coldness of the Liver. And this coldness may be produced by an over cold Air: therefore Hippocrates, aph. 22. §. 3. says, that Dropsies come in Autumn. Too much taking of cold things, especially drinking of cold and foul water after bathing or being in the heat of the Sun, cools the Bowels exceedingly. All manner of excessive Excretions, and Bleeding may cause it, Galen. l. 4. de præfag. ex paff. blames the Spleen, and a Stricture of the Liver. Some blame the breach of a Vein, or of Bladders full of water which fill the abdomen. Some think it runs in by the breach of the umbilical Vessels. Some, by the Ureters being bro-

ken; others hold that water may get into the abdomen by occult as well as manifest Passages.

§. 6.

According to Paracelsus the Cause of a Dropsie is an Aluminous Tarrar. He calls a Dropsie *spilt Water*, *spilt Liquor*, a *moist Dew*, and he affirms, it is nothing else but Water. He compares it to Rains: for as in the Macrocosm a Man is drowned by an Inundation; so in the Microcosm the Spirit of Life is drowned by Water. This Dissolution of aluminous Salt arises from the impression of the microcosmical Heaven and its Stars. He makes seven kinds of Dropsies, viz a Dropsie of the Liver, Spleen, Lungs, Brain, Gall, Kidneys, and Heart. He denies, that the Tympany is one kind of Dropsie; but he says it is a stoppage of the Belly; and Wind is caused, when nature has no vent. He makes two Tympanies, one of the Guts, another of the Womb. Though in truth the Stoppage of the Belly is not a Dropsie but the Wind-Colick; and the Tympany of the Womb is the inflation thereof.

§. 7.

Helmant blames the Spleen and not the Liver; because in many that died of a Dropsie he has found the Liver sound. He boasts how he has cured two thousand dropfical People, whose Urine was of a bloody black Colour, and they made not above a Spoonful in one Night; whose Liver if it had been bad, he confesses he could never have cured them. So dysenterick Persons and great drin-

kers fall into the Dropsie, not through any fault in the Liver, but because some Blood gathers in the convex part of a Gut. He holds, there is a three fold Matter. First, extravented Blood. Secondly Water in the *abdomen*, which is a morbid product. And he says, there is a third Matter which has its internal efficient in the internal vital Principles of the *Archeus* of the Kidneys. For he holds, that there is a certain virulent anodyne Quality in extravented Blood, or in some such Matter, which makes the Kidney forget its Office of separating the *serum* and so sends it back to the Belly. In a Tympany he says, that Wind proceeds from a certain indisposition of the local *Archeus*, which turns Mear, that is no way Windy, into Wind.

§. 8.

Allis thinks that an *ascites* proceeds from mere Water, which fills the parts in the lower Belly, and besides the Membranes are distended by the disorder of the Spirits, and so the Swelling increases. For in an *ascites* sometimes the Water so fluctuates, that the Patient can feel it. Then, when the *viscera* are so soaked in the *lymphæ*, they rot, and their *parenchyma* and the Coats of the Vessels and Glands swell, so that all put together they amount to a large Bulk. He thinks also that the *serum* too much separated from the Mass of Blood may cause an *anasarca*, in which he maintains that the *serum* is poured out of the Mouth of the Arteries into the Skin. He also blames the chyle poured out of its proper Vessels.

§. 9.

Solbius holds, that an *anasarca* comes from a thin watry and salt *serum*, poured out of the lymphatick and lacteal Vessels, supposing Obstructions by a vitiated Humor to be the most usual Cause of a Dropsie, which is attended by a stagnation of the *lymphæ* in Chyle; but especially of drink in the Vessels, and then by a breach and Effusion of what is contained into any place capable of it.

§. 10.

The Cartesians hold, that the lymphatick Vessels are broke by some hard thing, either pricking or cutting them, so that the *lymphæ* in an *ascites* is poured into the Belly; and in an *anasarca* into the whole Body. For when water in the *abdomen* grows thick, then the superficies of all the *viscera*, yea, the *peritoneum* and Muscles of the Body are beset with a Coat, which hinders the Vapors produced in the Body from being insensibly evacuated; hence it is, that it is so difficult to make such Patients sweat; but we find, if a sharp and inciding Clyster with some sudorifick Salt in it be given, and the Pores of the Guts thereby opened, when the pituitous Coat is removed, there is a great discharge of Water out of the *Abdomen*.

§. 11.

Now we will examine the causes of the Dropsie: and we will begin with an *ascites*. The cause therefore of this Disease is ordinarily

usually the *lympa*, Chyle, or much Drink, and sometimes separated from the Blood, is, when the Mass of Blood, deprived of its volatil Salt, is nothing but *lympa*, which is either by Stagnation or Acrimony, or breaks the Vessels. It is very rare, that the Stagnation alone causes this Disease, for I have known several die of a Stoppage of Urine, without any such Stagnation. Generally the cause of this Disease is a weakness in the Blood, which makes it insufficient to convert the Aliment into its Substance, and so must of necessity flow upon other parts. The immediate cause is the opening of the Vessels, especially the *omentum*, either because the *lympa*, or Chyle, do become too thick, or move too violently, or because by their quantity they eat through the Vessels, or because they continually press upon the Vessels, that were opened before by gross and pituitous Humors, or by the Humors of the Glands of the Mesentery and Pancreas, which at last burst, and flow out. I opened a young man, in whom I found all the *omentum* and *omentum* full of Humors, and *scirrhi*, and the Liver enlarged. And he had been a great drinker, which occasioned this Dropsy. The antecedent Cause was a serous Cacochymy, and Phlegm, partly a perverse Nature and Structure of some Vessels, and partly a weak Influx of Spirits upon the cutaneous Vessels; for according to this increase there is either a too great Relaxation of the Skin. Or when the cutaneous Fibres are too much contracted, Sweat

and Transpiration are kept in, and so of necessity Vapors are condensed in the Body, at length the serum is increased, and then a Dropsy ensues. The procatartick Causes are various, but chiefly Drink, either watry, spirituous, or thick, impure, and turbid, when it is taken in excess. Because by its coldness, it makes the Humors thick and immovable, destroys the natural Ferments, and contracts the excretory Pores, so that sometimes vomiting follows cold Drink, when the Pores of the Stomach are so contracted by Cold, that the Vapors which used to pass by these Pores, do not pass, but by distending the Stomach, and by sticking in the Fibres, and vellicating them, do cause Vomiting. Milk Meats eaten unmeasurably or unseasonably occasion it, also taking cold when the Body is hot, Diseases of the Mind, Melancholy, Grief, &c. the Jaundice, a Fever, some Excretions either augmented or suppressed: augmented, as over-vomiting, a continual Looseness, excessive Venus, too great expence of Blood: suppressed, as the Menstrua, Lachia, Hemorrhoids, Bleeding, Fistula's and the like. To these may be added some Diseases, that usually attend an *ascites*, as a Consumption, Quartane Ague, the Jaundice, a Scirrhus, Inflammation or Ulcer; Obstruction of the Ureters, &c.

The Cause of a Tympany is Wind pent up in the Stomach, Guts, or *Omentum*, which thereupon distends the *Peritonæum*.

The antecedent Cause is partly abundance of Phlegm in these parts, partly too much Heat, or a depraved Effervescence in the Guts between the Bile and Melancho-

lick

lick Juice, or the Pancreatick mixt with Phlegm; the Obstruction of the Chylifick parts, and such things contributing much thereto.

The piocatastick Causes, are all things that encrease Phlegm or Wind, or, when they are encreased, encrease the Heat and sharpen the Bile.

The cause of an *anasarca* is a *lymphæ*, by reason of a Clamminess and Toughness, and its dull Motion thereupon turned into a Gelly, and therefore Stopping in the lymphatick Vessels, or the Vessels being open, poured into the Pannicle.

The antecedent Cause is partly the abundance of those Humors, partly their Thickness and Clamminess (an Obstruction, Compression or Apertion of those Vessels and of the parts serving for Chylification and Singuification ensuing) and an Imbecillity arising thereupon.

The external Causes are a cold, moist, foggy, subterraneous or unusual air. Therefore such as sail from *Germany* to *Guiny* are usually troubled with Melancholy, Grief, acute and chronical Diseases, but especially with the Dropsie;

§. 12. Prognostick.

A Dropsie that comes from a *Scirrhus* of any part, or from cedematous Tumors of the Mesentery and *Omentum*, or from the scarcity of volatil Salt in the Blood or of animal Spirits, is scarce curable. They are in less danger, to whose Nature and Age the Disease is conformable, according to *Hipp.* §. 2. aph. 34. Difficulty of Breathing betokens the Disease to be inveterate; because it argues, the Humors are incrassated by contri-

nuance in the *Abdomen*, so that pores arising from thence, they do not freely pass through the Pores of the Diaphragm; and the more is greater, if they be sharp, for Acrimony easily may corrode the adjacent Parts. And I have very often seen yeas always in a manner, found *omentum* all corroded in such a manner, after they were dead in a Dropsie. Which makes the Dropsie incurable; for then all Drink immediately runs into the *abdomen*. A Cough in a Dropsie is bad; for it usually is a Sign that the Acrimony comes through the Diaphragm to the Lungs. It is bad; for it signifies, the Blood is so plentifully discharged from the Cavity of the *abdomen*, that the Blood grows dry, and has so much Moisture in it, as to stiffen the Mouth. It is a bad Sign in a Dropsie, when no Fluxion of the Water can be felt, then the Belly is over-stuffed with water.

The Following Aphorisms *Hippocrates* have respect to this sease. §. 3. aph. 22. Many Sore Diseases fall out in Autumn; the quartan and erratick, Disturbance the Spleen, Dropsies, Consumption, Stoppage of urine, &c.

§. 4. aph. 11. They that have the Gripes and Tortures about the Navel, and Pain in the Laps, cannot neither be cured by Medicines nor otherwise, it turns to a Dropsie. In this case there is Obstruction by gross Vapors.

§. 6. aphor. 8. In a Dropsie arising in the Body are not easily cured. The reason is, because the Dropsie fills the Vessels of the Body, and when the Matter cannot be excreted, it endeavours to get out the Sore, so that it has no Remedy.

which is exceeding requisite for the Cure of Sores.

§. 6. aph. 14. If one be ill of a Dropsy, and the water run out of the Belly, the Disease is ended.

§. 7. aph. 5. After Madness, a Dropsy, or Delirium is

Allo. §. 7. aph. 55. They, whose Liver being full of water bursts into an Omentum, their Belly fills with water, and they die. Hence it is evident, that Hippocrates did then sustain the Omentum in this Disease. The most dangerous sort of all is Tympany, next an Ascites; an Ascites is easier to cure than a Tympany. If in a Tympany arise an Inflammation of the Liver, or of any Muscle of the Belly, then Death is at hand, as I observed in two Patients. I have seen Sores in the Legs, and Eruptions thereby sometimes give Relief, and sometimes kill. A red and high coloured Urine, a quick Pulse, Heat, and Leanness of the Body, decay of Strength signify the Disease is dangerous. There is little Hope of a Cure, if the Patient be in his prime and strong, and if he have no febrile disposition.

§. 13. Dietetick Cure.

In a pituitous Constitution the Air must incline to heat; an humid, foggy and cold Air are

The Meat must be of good Nature and easie of Concoction, roast better then boiled, Broths with warming Roots boiled in them are good; All fower, salt, viscid, and Milk Meats must be avoided. All especially the flatulent is bad.

The Drink must be Beer well defecated, with Worm-wood or Juniper-Berries steeped in it, and every Draught may have ten or twenty Drops of Spirit of Mars dropt into it. A little Wine is allowable. But all Brandy and *aqua vite* is bad. And Drunkards have three Plagues, the Consumption, Gout, and Dropsy. Therefore Abstinence is the best Medicine.

Abstine & efficies, quod medicina nequit.

Avoid large drinking of cold Drink.

Motion must be moderate; for they are forced to abstain from all violent Motion, because of their Difficulty of Breathing; the sudden cooling of the Body, after violent Motion and Heat, is bad.

Sleep must be moderate and in the Night, not in the Day at noon. We must not cure Watching by Narcoticks; for they may prove Necroticks.

The excreta and retenta must be agreeable to Nature: for, as was said before, when irregular, they may cause a Dropsy.

The Mind must be kept cheerful: for Helmont has observed, that Grief alone is able to cause a Dropsy. Care, Thoughtfulness, and Passions of that Nature; and excessive Venus may easily produce this Disease.

§. 14. Pharmaceutick Cure.

THe Galenists prescribe universal and particular Remedies. The universal are either Preparers or Evacuators. The Preparers are the opening Roots, and Cichory, Bark of Dwarf Elder, Tamarisk, *calamus aromaticus* Leaves of Agrimony, Hore-hound, Germander, Ground-pine, Rosemary, *scordium*, Worm-wood, Seed of Fenil, *daucus*, Syrup of the two and five opening Roots, of Worm-wood, Agrimony, Maiden-hair simple and compound, and of Squills, and a thousand things besides.

Their Evacuators are either Vomitory, Purgative, Sudorifick or Diuretick. If the Matter be contained in the Stomach or flow to it, they provoke vomit by thrusting their Finger in their Throat, or with hot Water, or a Decoction of Horse Radish, and Powder of *asarum*, Dill and a little *Oxymel* and Oyl Olive.

The Belly is loosened by a Clyster, made of a Decoction of Chamomil, wild Majoran, Rew, lesser Centaury and carminative Seeds, adding hot Oyls and some Purgatives. Their Purgatives are such as purge Water. Their Sweats are Internal, or External. Then they give things to strengthen the Liver. Among Externals they commend Baths natural and artificial, Cataplasms, Oyntments, and Oyls.

§. 15.

They cure a Tympany almost with the same Remedies, only they use more Carminatives. A-

mong chlrurgical Means they not admit of Bleeding, the *cenna* allows of it in every Drop yet they will set a Cupping to the Navil. *Aëtius* advises opening of the *scrotum* with things or with a Seton. They der Cauteries, Causticks and to be used with Caution. In desperate Case they tap, but give the Prognostick, namely the Inwards be not decayed.

§. 16.

Paracelsus (whose Epitaph he cured all dropical) will have Moisture to be washed the Sulphur of all Metals above all he advises to expel ter by Mercurial *arcana*, which purpose he commends *præcipiolus* or *Mercurius à suo mortuus eductus*, above other Remedies; because *Mercury* only is able to expel the Water, that in the Pores of the Skin, so that no Spirit can come, but *Mercury*. In another Place he commends *diacuminum* in Lozenges, Else of Tartar, Vitriol, *diacubebæ*, *spiritus vita* drawn from Gold, commends this following for taking away all Dropsies;

Take of red Tartar one Pound Swallow-wort half a Pound, *cotbar* eight Ounces, the Wine as much as will incorporate them. Destil them by Alembick. The Dose is half Drachm Morning and Evening.

Paracelsus affirms, that the Elimination of Antimony cures Diseases of the Liver.

§. 17.

According to **Belmont** a Dropsy is regularly cured if the Urine is regularly cured if the Urine, either spontaneously or by Medicines. And a relapse follows, if the Disease be not removed from the Kidney.

§. 18.

Willis cures an *ascites*, by Vomits, Purges, Diuretics, Diaphoreticks, and in a word, Hydragogues. Diureticks are used in an *Ascites* and Diaphoreticks in an *Anasarca*. He commends Clysters. In a Tympany will not admit of spirituous and oil things. He is rather for Purges and Clysters. Among topical Remedies he sets little by carminative and hot things, which consist of a volatil, but rather uses fixt Salts.

§. 19.

According to **Sylvius**, when Water offends in place it intends a removal: the Breach of the Vessels, Consolidation, and Obstruction, opening. He corrects the Redundance, Saltiness and Viscosity of the *serum* by Aromatics. When the Vessels are broke, he uses Consolidants: But they are of little use in the beginning of a Dropsy when the *lymphæ*, Chyle or Urine stagnates and gathers in any place, so as to swell, the Humor will be removed by Sweating or Purgings. He removes Obstructions of the Vessels caused by coagulated Phlegm, with incising and evacuating things. He commends

Hydragogues, and External Means, as Bathing. He is also for Salivation: But then the Patient must have a care of Cold, and must look to his Throat, lest the *uvula*, Glands or part of the Tongue should be consumed.

§. 20.

The **Cartesian** Method of curing the Dropsy consists in gentle Incisers, in Hydragogues, and in strengthening the *viscera*.

§. 21.

IN our Opinion, care must be taken to remove Obstructions, and restore the parts, and if the Disease have got Head, to get out all the potent and serous Matter, that oozes out of the Lymphæducts, and Vessels of the *omentum* and other parts (but first the Acidity must be corrected.) Then, to invigorate and strengthen the Mass of Blood. As to the first, we will begin with gentle Incisers; to which purpose a Decoction of the Woods will be proper, to which two Scruples of the fixt Salt of Broom, Beans or Wormwood, and *spiritus salis dulcis* may be added. Chalybeate Wine is good in this Case, and Wine wherein white Flints with metallick Veins have been quenched; for they open and bind gently afterward. But while they are taking these things, they must now and then take a Purge, such as this following;

Take of *Tartarus vitriolatus* fifteen Grains, Refine of Jalap half a Scruple, Trochiscs of *Albandal* two Grains. Mix them, make a Powder. Take

Take of Resin of Jalap half a Scruple, Trochiscs of *albandal* Three Grains, Magistery of Gum *gutta* two Grains, *Mercurius dulcis* half a Scruple, Oyl of Caraway three Drops. Mix them. Make eleven Pills. Or ;

Take of Essence of Buck-bean one Ounce, Extract of Spurge one Drachm. Mix them. The Dose from twenty Drops to thirty.

Or give only one ounce of Syrup of Buck-thorn at several times, till the Humor is spent ; or this following for such as are strong ;

Take of Leaves of *Senna* two Drachms ; Rhubarb one Drachm and an half, Leaves of Buck-bean half an Handful, Tamarinds half an Ounce. Boyl them in a sufficient quantity of Spring Water to three Ounces. In the Colature dissolve of Manna one Ounce, Syrup of Buck-thorn

half an Ounce, and of Juice of Roses two Drachms. Mix them. Make a Potion.

Pills of Gum Ammoniac *Mercurius dulcis* are good. *Thum minerale* is also good. *Boyle* commends *pitula lunaris* would recommend the following Mixture to all People.

Take of Elixir *proprietatis tartari* *sassafras* each half Ounce, *mixture de tribus* Ounces, liquid Essence of Wood one Ounce. Mix them and let them stand in Digestion for a Day and a night. Then add a fourth part of Essence of citron Rind. The Dose is one Scruple to a Drachm in Wine or Water of the Berberis Flowers of Elder two Ounces.

Sudorificks and Diaphoretics are good.

C H A P. X.

the Bloody-Flux, commonly called Hepatick, and the Excess or Suppression of the Hæmorrhoids.

§. I.

The Hepatick Flux (so called, because it is commonly thought to proceed from the Liver, which differs matter to that Flux) is, *an* and frequent voiding by Matter like the washings of *an* of a reddish yellow Colour. is a rare Disease, and I never met with it but thrice in all my practice.

The Immoderate Flux of the Hæmorrhoids is, *when* abundance of Blood runs out of the hæmorrhoidal Arteries, and they are called the Hæmorrhoids, which run at certain times, as Womens *Menses*.

The blind Hæmorrhoids or Piles, *are, when they swell with much Blood.* They are distinguished from the Hepatick Flux, because in the Hæmorrhoids the Excrements follow the Blood, and the Hepatick Flux on the con-

Bile, because of a bad Constitution of the Liver, *viz.* its moist and cold, or hot and soft intemperature mixt with a little Blood. Some derive it from the *vena porta*, others from the *anastomosis* of the Mesenterick Arteries. I have seen the *vasa brevia* broke: therefore I question not but partly they, and partly the arterious Vessels, opening into the Guts and Mesentery, are broke.

In the Hæmorrhoids the Ancients accused the hæmorrhoidal Veins. But I think the Vessels of the *anus*, and the Arteries, rather than the Veins, proceeding from the lower Mesenterick, and the Iliacal Hypogastrick Artery to the *anus*, are the parts affected both in the Hæmorrhoids and Piles.

§. 3. *Diagnostick.*

IN the Hepatick Dysentery sheer Blood, or Blood and *Pus* is not voided as in a true Dysentery; but only Blood diluted with *serum*, like Blood and Water, or the Washing of Flesh. The Hepatick Flux is not continual, but stops for two or three Days, and then returns. In an Hepatick Flux there is no Pain or but very little in the right *Hypochondrium*,

§. 2. *Part aff. Etcd.*

Some Authors say an Hepatick Flux comes from the biliary Duct, and is nothing but vicious

pochondrium, and no Shavings of the Guts come. If black Blood come once with Swooning and other bad Symptoms, the Patient is in danger. The Patient is pale, for loss of Blood. The Patient himself is best able to give an account of the Hemorrhoids and Piles.

§. 4. *Cause.*

THE Galenists blame the Imbecillity of the Liver, contracted from either a hot or cold Intemperature of Liver: If from a hot, there is Thirst, and Vomiting of yellow and eruginous Bile; the Tongue is rough, the Patients are of a hot habit of Body, hairy and passionate. If cold, the Signs are contrary. In the Hemorrhoids they hold the proximate Cause to be the Repletion, Distension and Apertion of the Veins in the anus with feculent, melancholick Blood. The immediate Cause of the running Hemorrhoids is the Irritation of the expulsive Faculty: Of the blind Piles, the Debilitation of the expulsive Faculty.

§. 5.

THE Paracelsists make the Hemorrhoids to be a Disease like the Leprosie; and in the Hepatick Flux they say, strong Salts are dissolved in the serum.

§. 6.

ACCORDING to Helmont the Hemorrhoids arise from a disagreement between the Bile and the pylorus, and not from the Blood in the hemorrhoidal Vessels.

§. 7.

ULLIS places the Cause of these Diseases in the Acrimony, Dyscrasie and too great Effervescence of the Blood, which opens the mesenterick and hemorrhoidal Vessels.

§. 8.

SYLIUS never met with the Hepatick Flux (which I admire at) yet he thinks it arises from a serous Blood, that fills the Vessels: and he says, that it is made serous by drinking much watry things, Beer, and Brandy, whereby the firmness and Tone of the Parts is debilitated. He says, the flux of the Hemorrhoids, is either critical or symptomatick, and this arises from Acrimony of Humors, which opens the Hemorrhoidal Vessels.

§. 9.

THE Cartesians in the Hepatick Flux blame the sharp, acrid, and corroding Particles of the Blood, which irritate and open the Fibres of the Vessels, and so let out the Blood.

§. 10.

IN our Opinion the Hepatick Flux proceeds from an excess of Humors, opening the Cavities of the Arteries especially. And the Hemorrhoids, from the Acrimony likewise of Blood, fretting the capillary Arteries, which as Sydenham observes, consist but of a thin Coat. In the blind Piles the hemorrhoidal Vessels are collap-

er by cold, being in the ex-
treme parts of the Body; or be-
cause the Veins ascend perpendi-
cularly, the hæmorrhoidal Arte-
ry may easily be compressed, and
the Blood cannot be sufficient-
ly forced upwards. And when
there is Acrimony, there is great

§. 11. Prognostick.

The Hepatick Flux, though in-
tolerant, is not so easie to cure,
often proves fatal, especially
where there is a Fever, and it be ma-
lignant. In cold Constitutions it
may turn to a Dropsie or Con-
sumption.

The Flux of the Hæmorrhoids
must not be neglected, because if
it continue long, it may occasion
other mischiefs, as Dropsies, Ca-
tarrhes and Consumptions: Yet a
moderate Bleeding, especially if it be
periodical, is good in melanco-
lic Cases. Wherefore a mode-
rate Flux must not be stopt sud-
denly, nor must all the Veins be
tied up; because experience has
taught us, that it has occasioned
various Diseases. Hippocrates
gives us good Caution, *f. 6 aph. 12.*
When a man has a mind to stop the
hæmorrhoids, which have been of
long continuance, unless one be left
open, he runs the hazard of a
pleurisy or Consumption. When the
hæmorrhoids are very painful, and
continue often, especially if any er-
ror be committed in the External,
they may degenerate into grievous
Inflammation, Gangrene,
Ulcer or fistula, which
are incurable by reason of the
continual Falling down
of Excrements, and other Causes.
After the Hæmorrhoids are good

for several Persons. For, as Hippo-
crates *S. 6. §. 11.* says, the Hæ-
morrhoids are good for the Me-
lancholick and Nephritick. And
the following Aphorisms have re-
spect to this place. *All rejection*
of Blood upwards is bad, but black
downwards is good. Also *f. 6.*
aph. 21. *When such as are mad*
have the varices and Hemorrhoids,
the Madness is over. They pre-
serve from the Pleurisie, Peripneu-
mony, phagœdœna, furunculus, ter-
minthus, Thrush, and from the Le-
prosie. They are good for the
Varices, Gout, hard Spleen, the
Suppression of the Menstrua, and,
as I have observed, for Women with
Child.

§. 12. Dietetick Cure.

THE Air must be changed ac-
cording to the variety of the
Causes, and for the most part it
must be temperate.

Meat must be moderate and ea-
sie of Concoction. When the
Hæmorrhoids run too much; and
in the Hepatick Flux it must be
moderately astringent; but in the
blind Piles it must be some-
thing moist. The Drink must be
little, a small red Wine may be al-
lowed. A Decoction of Barly
with Harts-horn is good. I have
found a Decoction of Toad-flax
good in the Hæmorrhoids, and E-
mulsions also of the cold seeds
made with a Decoction of Harts-
horn. Sleep is good, and Rest. The
Passions of the Mind, Studies, and
Venus must be avoided; for they
hinder the Cure. The Excrements
must be like the natural.

§. 13. *Pharmaceutick Cure.*

THe Galenical Method consists, First in the Cure of the intemperature of the Liver and its Flaccidity. Secondly in the removing the Causes thereof. Thirdly in Mitigation of the Symptoms. They purge, and in a *Plethora* they bleed. And at last they give Astringents, and Incrassants for the Blood. But in the blind Piles they do all they can to open. If the Body be plethorick they bleed in the Foot, and apply opening Medicines to the Parts.

§. 14.

THe Paracelsists prescribe things to take off the Acrimony of the Salts and restore the natural balsam of the Blood. And in the blind Piles they use gentle Corrosives, which do not hurt the Guts. They mitigate Pain with Saturnine Medicines.

§. 15.

Helmont cures only by *arcana*, the chief of which is the Sweat of dying Persons taken in clothes and applied to the *Hæmorrhoids*.

§. 16.

Mullis has the following inventions. 1. To stop the Flux of the Blood by the Belly and its Turgescence. 2. To divide the Flux another way. 3. To stop the gaping Orifices of the Vessels within the *intestinum rectum*.

He uses Ligatures and Bleeds. He uses outward Applications. He commends Narceuticks. For prevention he uses Bleeding and Purgings. In Summer time good to drink Iron-water.

§. 17.

Sylvius, when the Flux of *Hæmorrhoids* is critical, gives relief, thinks it ought to be stop'd: But when it continues and is symptomatick, he stops it with his well known mixture, or with some other medicine, that is good in Blood.

§. 18.

The Cartesians, for taking off the sharpness of Blood, commend gentle Balsamicks. To rectify sharp salt Humors, they use Opiates and external Astringents.

§. 19.

The Cure of the *Hæmorrhoids* consists chiefly in removing the Causes and mitigating the Symptoms. First therefore an aperient Decoction with gentle Astringents may be given. Then a Purge may be given of *Myrobalans* or *Turkey* barbs, *Myrobalans* or *Turkey* Whey. Afterwards Astringents and Driers may be taken inwardly and applied outwardly. Sweats may be given. *Chalybeate* and *Tartarus vitriolatus* and *Chalybeate* are good Medicines. Several styptick Powders are good. highly value this following;

of *crocus Martis* calcined
to redness, Vitriol of Mars cal-
cined to whiteness each one
Drachm, red Coral prepa-
red one Drachm and an half,
Camphore six Grains, Vitriolick
Soor scraped off the Bottom
of a bras Kettle half a Drachm,
Mandatum cydoniatum Hoffmanni
three Grains. Mix them. Make
a Powder. The Dose is from
half a Scruple to a Scruple in a
proper Vehicle.

I have done much good with
a mixture of Daisie Flowers, Pow-
der of Liver-wort, Mather, and
Rock-stone mixt with *tinctura ano-*
nima. I highly value Opiates in
this Case; but they must be given
with Caution. If there be a Ple-
thory, I bleed, apply Cupping-glas-

ses to the Shoulders, and make Li-
gatures.

The Cure of the *Hæmorrhoids*
differs but little from the Cure of
any other bleedings. Therefore
first of all, if there be a Plethory
I bleed; or if the Patient be low
in his Spirits, I cup the Shoulders
or Loyns. If it proceed from thin-
ness of Blood, we must use Infrac-
sants and Vulneraries. If it pro-
ceed from too great thickness, At-
tenuants and Incisers must be u-
sed. If from Aerimony, it must
be corrected by Spirituous or con-
trary Acids, or by Narcoticks. If
from a salt or acid Humor, or from
Worms, *Mercurius dulcis* may be ad-
ded.

Several outward things, which
may be met with in practitioners,
may be applied.

CHAP. XI.

Of the Hypochondriack Disease.

§. 1.

THE Hypochondriack Disease is (as far as I am able to judge) a sad Sensation depending upon a disorder in the animal Spirits. It differs but little from Womens Vapors.

§. 2. Division.

WE formerly divided Melancholy into *cephalick*, when only the Animal Spirits in the Head were disordered, without any fault of the *hypochondria*; and *hypochondriack*, when the Disease has its rise from the *hypochondria*, and when the Spirits, disturbed by consent, become gross, few and unequal.

§. 3. Part affected.

THE Ancients held the Part affected in this Disease to be the Spleen. But *Sylvius* says, he always found the Spleen the best part in Bodies that died of this Disease. Some of the moderns blame the Stomach, and its depraved Ferment. Others, the Mesentery. Others, a hot Liver

and a cold Stomach. Others, the Stomach and the Guts. But I knew several troubled with this Disease, who had good Stomachs. Many hold, the Cause is in the Arteries and Veins. Some in the omentum. And some in the Pancreas. We do not only propose, but verily believe that the Cause of this Disease lies in the fibile, nervous and membranous Parts of the Abdomen.

§. 4. Diagnostick.

THE Patients after eating feel pain in their Stomach, and complain, that all their food turns to Phlegm. If they Drink at Dinner, they find the Phlegm come into their Mouths. They have a great Appetite, and if they fast long they faint, because the Acid in the Stomach has nothing but its Fibres to work upon. The reason of their spitting is, because the Acid in the serum opens the lival Glands, and while the Blood is in a troubled state, the serum is more discharged by the Arteries upon the Glands, than into the Kidneys: Sometimes it comes from the spoiling of the Ferment in the Stomach. Some hypochondriacks,

icks, who have a lixivious and
 forum, have a dry Mouth.
 are troubled with Nauseous-
 and Vomiting, and sower
 things. The Wind runbles up
 down their Guts, and some-
 es puffs up the Colon on the
 Side, which makes the Vulgar
 take it for the Sp'een. They
 short breathed, like Women
 the Vapors. They sweat abun-
 of cold sower Sweats. They
 often a Pain in their Back,
 of the nervous Parts there-
 . They have great Heat in
 hypochondria, which shows it
 by flushings in the Face. The
 is sometimes rare and slow,
 other times frequent and quick.
 are troubled with Numbness,
 cannot Sleep. This is in a man-
 a pathognomonick Sign, they
 know and then a limpid Urine,
 as rock Water, in great quan-
 and at once. They are trou-
 with the Vertigo. They have
 sharp and resolved Judgment.
 which is worst of all, though
 have sick Bodics, they have
 their Minds. They are troubled
 incurable Despair. They ima-
 to themselves nothing but
 and melancholick things.
 are perplexed in Mind upon
 least occasion, and are averse
 Joy or Hope.

§. 5. Causes.

The Galenists make the Cause
 to be Fumes and Vapors raised
 in the hypochondria to the Brain
 the Cause of this Disease. But
 the Moderns have sufficiently ex-
 plained this Opinion.

§. 6.

THE Paracelsists talk of, I know
 not what, excrementitious Tar-
 rar, lodged in the Sp'een and other
 Places, which occasions this Di-
 sease.

§. 7.

HELMONT derives the Cause of
 this Disease from the erring
 duumvirate. And by the Duum-
 virate he means an acid and alkali,
 whence he derives all the Sym-
 ptoms in hypochondriack Per-
 sons. Grembs thinks there is some
 Matter lodged in the pancreas,
 which affects the Stomach.

§. 8.

WILLIS blames the succus
 nervosus and the animal
 Spirits. But whether there be such a
 succus, as Glisson and he have ima-
 gined, is very much questioned.

§. 9.

SOLBIUS makes the Cause to be
 the Effervescence of Phlegm
 and Bile in a different Manner. For
 he makes three Sorts of hypochon-
 driack Melancholy. The first is
 Acid, when People belch sower.
 The second Nidorous, when they
 belch strong and ingratelul. The
 third Insipid, when it favors of no-
 thing.

§. 10.

THE Cartesians hold that these
 melancholick Thoughts arise
 from the Grofness, Paucity and
 Inequality of the Spirits.

§. II.

WU hold, that an Acid lodged in the first Ways, and affecting the nervous Fibres, may easily occasion this Disease. Sometimes there is an Acid in the Stomach, sometimes in the pancreatic Juice. Now there are divers sorts of Acids, one of Vinegar, another of Citron, another of Vitriol, another of Sulphur, another of Nitre, another of Salt, another of Alum, &c. A vitriolick Acid produces an Epilepsie rather than an hypochondriack Melancholy. And in a hypochondriack Melancholy there is an aluminous Acid.

§. 12. Prognostick.

THis is no dangerous Disease; but it is very tedious. In continuance it sometimes turns to Madness, cephalick Melancholy, Dropsy, Apoplexy, Hectick Fever, or Epilepsie, and so sometimes proves incurable. After recovery by generous Medicines, they are apt to relapse. And *Montanus* judges very well of it, *consil.* 230. In the Cure of this Disease we can set no time, whether a Month or Year, as we may in other Diseases, but we must keep doing all the life time either for Cure or Prevention.

§. 13. Dietetick.

THe Air must be moderately hot, pure and thin, either by Art or Nature. The Meat must be easie of Concoction: The Drink

must be good Wine diluted with Spaw Waters; but avoid Drunkenness.

*Mente caret Bacchus, non
Cupido pudore,
Et loca sola metus: quæ
fuge.*

Motion and Rest must be moderate, but rather exceed in Motion. Sleep and Watching must be moderate. As for the *creta* and *retenta*, the Belly must be loose by Art or Nature, the Hemorrhoids, and other Excretions must have their natural Course. The Passions of the Mind must be moderate, especially Melancholy. Therefore observe this rule;

*Atra melancholico regna si
pore bilis;
Lata ede, lata bibe, lata
vide.*

§. 14. Pharmaceutick Cure.

THE Galenists, to open the obstructions give gentle Purgatives and Clysters, and a gentle Vomitive when they have thus cleared the first Ways, they bleed and open the Hemorrhoids. Then they prepare the melancholick Purgative, and when it is prepared, they purge it off by Vomits and Purgatives, and so alternately use Purgatives and Purgers. And after all, they strengthen the Parts.

§. 15.

The Paracelsists dissolve the Tartar by Tartar, and Mercurial Medicines.

§. 16.

Elmont commends a Medicinal acid Water, and Salts. He says, that he has an Anodyne, which will cure it; but he con-

§. 17.

Willis advises Martial Aperients, Iron Waters, and Vomits, and sometimes Bleeding of Blood.

§. 18.

Whitius makes the Cure to consist in four things. 1. In moderating the Diet. 2. In Altering the peccant Humors. 3. In evacuating of them. 4. In Removing of Decays. We have done with the Diet. He corrects a viscid Acid with Medicines, that have a lixivious Salt in them. He dissolves viscid Phlegm with Acids and Gums. If a bilious Humor abound, he corrects it with Acids, and volatile Spirits. He carries off the Humors with Purgatives; and he commends Mercurial Medicines. He purges Bile with Rhubarb, Tamarricks and Aloes: And the Serous Humor with Jalap. If it proceed from the Austerity of the Pancrea-

tick Juice, he corrects it with Spirit of Sal Ammoniack.

§. 19.

The Cartesians prepare the Body and then purge; and use several things prescribed in a cephalick Melancholy.

§. 20.

Ure first likewise prepare and then purge. This may serve for a Preparative;

Take of *Crocus Martis aperitivus* two Drachms, *Tartarus chalybeatus* half an Ounce, *facula ari* two Drachms, Crabs Eyes one Drachm, *antimonium diaphoreticum* two Scruples. Mix them. Make a Powder, divide it into six equal Parts. Or;

Take of *crocus Martis aperiens cum sale* six Drachms, *pulvis cachecticus Quercetani* two Drachms. Mix them, and divide it into eight equal Parts.

Then we give simple Purgatives with good Success;

Take of Powder of Jalap one Scruple, Salt of Wormwood five Grains, *antimonium diaphoreticum* three Grains. Make a subtil Powder. Or,

Take of *massa pil. coch.* or *tartarear.* half a Drachm or two Scruples, Powder of Castor two Grains, Balsam of Peru ten drops. Make four, five or seven Pills. Repeat them three Mornings.

In strong People Vomits will be good. A Steel Course is good to correct the Dyscrasie of the Blood and Spirits, and exercise must be used. If there be violent Pain, Vomiting, or Loosness, Opiates will be proper. In the hypochondriack Melancholy fixed hysterics are good. If there be much use Carminatives inwardly and outwardly.

CHA

C H A P. XII.

Of the Scurvy.

§. 1.

The Scurvy is called *scelerthybe*, *σκληρὴ*, and by *Marcellus* *scorbutus*. It is a Disease familiar upon the Sea-Coasts and in Northern Countries. *Hippocrates* seems to describe it in these words. "In this Disease (says he) the Mouth stinks, the Gums part from the Teeth, the Nose bleeds, Sores break out in the Legs, some heal up and others break out, and the Skin withers and turns black."

Description.

It may be described to be a Dyscrasia of the Blood and other Juices, depending upon an Acid troubling all our Countries, and introducing divers Symptoms in divers Parts. Few people, that fare well, are free from it. It is sometimes hereditary, and sometimes adventitious; sometimes primigenious, which follows no other Disease, sometimes succedaneous to another. Some is fresh and easily cured, another is inveterate and difficult.

§. 2. *Part affected.*

The Ancients held, the Spleen was affected above all other Parts. But we take the Subject of this Disease to be the Mass of Blood, not excluding the other Humors.

§. 3. *Diagnostick.*

It is attended with divers Symptoms, with the Head-ach, and frequent *Vertigo's* which end in an Epilepsy or Apoplexy, a Palsy in the Legs or one Side, the Face breaks out with Pimples, the Teeth are troubled with Blackness, Looseness, Falling out, Aching, the Gums are sometimes yellow, sometimes red, swell and itch, and if they be but touched bleed, and are eaten away, the Breath stinks, they spit constantly, they have Convulsions, and Contractions of the Limbs, so that they grow crooked sometimes. They have a Palsy in their tongue, some cannot sleep at all, others sleep too much. They have Shortness of Breath, Palpitation of the Heart, a Disposition to a Consumption, Spitting of Blood, Swooning,

&c.

&c. They have a bad Stomach, sometimes they are too loose, another while too costive, Gripes in the Guts, which are so racking, that sometimes the *peritonæum* is burst. There are Spots, sometimes red, sometimes livid, and sometimes black, which at last turn to Ulcers. There is a Dulness and Pain in the Limbs, a Wasting of the Flesh, and a Numbness and Tingling of it. The Urine is thin, pale, vinous or red, with Gravel sticking to the Pot. Sometimes there is a Scum upon it, which is mistaken for far.

§. 4. Cause.

THE Ancients blame a Melancholick, tenacious, & gross, crude Humor, or a pituitous one, which mixt with the Mass of Blood causes a Cachexy. And this obstructs the Spleen or Liver, and causes all the forementioned Symptoms.

§. 5.

THE Hermeticks derive it from an impure Tartar, diluted with the Serum.

§. 6.

HELMONT blames the Spleen and Stomach. For the Spleen contains an acid Ferment, and the Stomach, because of abundance of fixt Salt performs not its Office aright.

§. 7.

WILLIS places the scorbutick *miasma* either in the Mass of Blood, or in the nervous Juice, or in both.

§. 8.

SIBBIUS does not any where professedly treat of the Scurvy. But he ascribes the Cause of it to an over acid pancreatic Juice, viciously fermenting with the Bile.

§. 9.

THE Cartesians say, the Cause of this Disease does chiefly consist in the Blood, being impregnated with much fixt Salt, or a fixt Acid.

§. 10.

WE hold, that the Cause is a fixt Salt, but sharp likewise, which resides in the Mass of Blood, wherein there are many Acid or Muriatick Particles; Acid, when the Blood is thick and black; Muriatick, when the Blood has lost its Consistency, and is ever thin. He that pleases, may find, that all the Symptoms agree with this Cause.

§. 11. Prognostick.

THE Scurvy is a chronical Disease. In the beginning, it is be known, it is easie to cure; but when it has communicated its Malignity to the Viscera, it is scarce curable; yea, it sometimes degenerates into a Dropsie, a Suffocative Catarrh, a morall Dysentery, or Consumption, seldom into an Apoplexy or Palsy. In such as have it hereditarily, it is scarce ever so perfectly cured, but there will still be some remains of it. It is bad for old Men. Women

men are most subject to it, because of their sedentary Life, they have it sometimes for fifteen or twenty years. Men have it not for above seven or eight. Shortness of Breath, livid or black Sores, and Pains about the Nails are all bad Signs. When the scorbutick viscera grow scirrhus and swell, or the Lungs ulcerate, there is small Hope.

§. 12. Dietetick Cure.

The Air must be pure Serene, and inclining to a heat; a marine, marshy, cold or foggy Air is bad. The Meat and Drink must be easie of Concoction. Avoid barre and salt things, and sweet things. The Wine must be small; the Beer, if any, well wrought, and joyned with Antiscorbuticks. Brandy is bad. Motion and Rest must be moderate, it is bad to stir your Meal, while the Body abounds with bad Humors. And too much Idleness occasions it. Sleep and watching must be moderate. The excreta and retenta must observe their natural measures. As for the Passions of the Mind, the Patient must keep himself cheerful: for scorbutick People are generally sad.

§. 13.

The Galenists use all Medicines, that are good for Melancholy. Therefore they give Preparers and Evacuaters, and at last Specificks.

§. 14.

The Hermeticks give Medicines to dissolve the obstructing Tartar, both Spirits and Salts.

§. 15.

Helmont gives all volatil things.

§. 16.

Willis makes the Cure to consist in the following Intentions. In rectifying Chylification in the first Ways, in restoring the lost or depraved Ferments, and in opening Obstructions; to which end he commends Catharticks, Digestives, and Aperients, Diaphoreticks and Diureticks. And he varies his Medicines according to the nature of the Scurvy, whether it be hot or cold.

§. 17.

Sylvius says but little of this Disease; however he commends volatil Salts for it.

§. 18.

The Cartesians Cure consists in volatilizing the fixt Salt in the Blood, and in removing Obstructions.

§. 19.

It is our Method first to correct Crudities, in the first ways, which is best done by Absorbents mixt with Specificks;

Take of *crocus Martis aperitivus* one Scruple, Ivory prepared without Fire, Crabs-eyes prepared each half a Drachm, *antimonium diaphoreticum* one Scruple. Mix them. Make a Powder, which may be taken for a Week and longer.

Some-

Sometimes I bleed, cup or apply Leeches first. For Purges, Hydragogues and Phlegmagogues are best. If one be strong, Vomits are proper; but they must be gentle. Clysters may be given, and Sweats. But always Specificks must be intermixt. In a hot Scurvy these Vegetables are good, Leaves of Fumitory, Endive, Dandelion, Spleenwort, Scabious, small Sengreen, Wood-forrel, Brook-lime, Germander, Borrage, Roots of *Scorzonera*, Polypody, Cichory, Fenil, Parsly, China, Flowers of Broom, Elder, Marigold; of Fruits, Currans, Damasck Prunes, Walnuts, Citrons, Oranges, Limons, Pine Nuts; Seeds of Citron, Endive, &c. In a cold one all Medicines are proper, which abound with a sharp

volatil Salt, the chief are Scurvy-Grass, Pepper-wort, Horfe-Radish, Arsemart, lesser Celandine, Rew, Rocket, Wormwood, Buck-bean (which is an excellent Medicine) Mustard, Elecampane, *Acorus*, Angelica, Zedoary, Juniper-berries, gum Ammoniack, *Lacca*, Martial Medicines, &c.

Scorbutick Medicines keep not their Virtue long; nor must the Spirits be prepared by Fermentation, because the volatil Salt is lost. Dried Herbs are seldom used. Divers Receipts may be made out of the foresaid Medicines. And as for the Symptoms they may be referred to their proper Chapters, where you may find their Cure. Only you must add Antiscorbuticks.

CHAP. XIII.

Of the Diseases of the Kidneys and Bladder.

§. I.

The principal Diseases of the Kidneys and Bladder are the same in both, Inflammation and Ulcers in both, Bloody Urine, Diarrhea, Pissing of Blood, Dysuria, Hematuria, or Suppression of Urine, and Strangury, which we shall discourse of in order.

Stone in the Kidneys.

THE Stone in the Kidneys, or nephritic Pain, is a Solution of Continuity arising from Exasperation of the Kidneys by Gravel or a sticking in them, and a painification of the Fibres of the Nerves and Ureters, or from a sharp acrid matter irritating the Parts.

Distinguishing Signs.

CHAP. This Disease is like the Colick, but is distinguished from it; when the Stone continues fixt in the same place; in a Colick the Urine at first is turbid; in the Stone it is clear, in progress of the Stone it gives a turbid Sediment,

and at length Stones and Gravel come away.

Ischuria and Dysuria.

Ischuria and Dysuria differ only in degrees, and they are either a Suppression or Imminution of making Water, either because serum is wanting, or the Ferment of the Kidneys is spoyled, or it comes from the Stone, &c.

Strangury.

THE Strangury is a continual desire to make Water, with excessive Pain, and Heat, produced either from the foresaid Causes, or usually from a vitious Acid.

Diabetes.

A Diabetes or hydrops ad matulam is a frequent and plentiful making of Water, with the Consumption of the whole Body, arising from a Salt, which precipitates the Blood into the Serum.

Stone.

Stone.

STones, namely tartareous Particles, grow in all Parts; but most frequently in the Cavity of the Kidneys and Bladder, and they differ in magnitude, raggedness, shape, colour and number. It (as all tartareous Diseases are) is hereditary.

§. 2. Part affected.

THE parts affected in all these Diseases are the Organs of Urine, namely, the Kidneys and Bladder, with the parts intermediate and common to them both, the Ureters and *urethra*, yea all the nervous and membranous Parts, that encompass these.

§. 3. Signs of the Stone in the Kidneys.

THE Stone in the Kidneys is discovered by a fixt Pain in the Loins, bloody Urine, thin and watry about the beginning of a nephritic Fit, voiding of small Stones, or Gravel, an acute pain along the Duct of the Ureters, Nauseousness and Vomiting, a Numbness in the Thigh. When the stone gets into the Urinary Passages, or is displaced, so as with its pointed corners to prick a Membrane, the pain encreases. Sometimes viscous Matter is voided, as well as Gravel.

Signs of the Stone in the Bladder.

WHEN there is a Stone in the Bladder, the patient lies toward the Pubes, and there is an Itching in the Passage of the Urine. Stoppage of Urine is common to both; it is very painful, sometimes the Patient feels the Stone remove from one side of the Bladder to the other, that is, when it is not wrapt in Phlegm; the Urine is often troubled and watry as Milk. The Pain argues the bigness of the Stone. In the Bladder, which grows worse after Exercise of the Body; there is a Difficulty in making Water, especially before it is made, about the Glans. When the Patient makes Water, he also goes to stool. A viscid glutinous mucus is voided with the Urine, sometimes the Urine is bloody.

Signs of Inflammation of the Kidneys and Bladder.

IN an Inflammation of the Kidneys sometimes a dull, burning or throbbing Pain is felt in the Loins, attended with a continued Fever, Head-ach, uneasiness, Thirst, and Restlessness. The Urine is painful and hot; it is difficult to lie either on one side or on one side; the Patient cannot turn himself nor raise himself without Pain. In an Inflammation of the Bladder the Pain is felt above the Pubes, there is Fever and the foresaid Symptoms. The Urine is high coloured,

is made, and that with Pain and Heat, the Belly is bound, there is a strangury and redness in the Parts about.

Signs of an Ulcer in the Kidneys and Bladder.

AN Ulcer in the Kidneys and Bladder may be known, when the Urine has proceeded, which is on some occasion an Inflammation that corrode the Kidneys or Bladder, when there are manifest Signs of the Stone. It may be known by the Colour of white, thick, glutinous and stinking pus, which is sometimes Bloody. But all the difficulty is, to know, whence the Pus proceeds, whether from the Kidneys, Bladder, or from some other else: For in an *Empyema* such Diseases oftentimes are voided with Urine. But if you take good notice, you may know it, by the site of the Pain, by the Quantity of the pus, which is in greater Plenty from the Kidneys, than from any Place else; by the Quality of it, its Colour, which is whiter, and its Taste, which is pleasanter, than if it came from the Bladder; from the Consistence, but less viscid, than if it came from the Bladder. In an Ulcer of the Bladder there is always in a man a Dysury or Strangury, and seldom in an Ulcer of the

Signs of an Ischury and Dysury.

THE Ischury and Dysury are easily known, but not whether they proceed from the Kidneys or Bladder. You may know it by the Swelling or not Swelling of the Bladder in the stoppage of Urine.

The Strangury, *Diabetes* and Incontinence of Urine are easily discernible.

§. 4. Cause of the Stone.

THE Galenists thought, the Cause of the Stone was, a thick, rough and phlegmatick Humor, baked by Heat into a Stone, like bricks in a Kiln.

Cause of Inflammation.

IN an Inflammation of the Kidneys and Bladder they blame some hurt of the Vessels through Heat arising from Stagnation, Extravasation, and Corruption of the Blood therein.

Cause of an Ulcer.

AFTER an Inflammation of the foresaid parts an Ulcer is often produced. For every Ulcer, according to them, is a Solution of Unity caused by Erosion, and the parts may be corroded by any sharp Humor. So a Stone may tear the parts. A Blow, Fall, Compression, strong and sharp Diureticks, such as *Cantharides*, may breed an Ulcer.

Cause of Bloody Urine.

Blood is usually voided by the Kidneys spontaneously and suddenly. Wherefore *Hippocrates* says, They that piss Blood spontaneously and on a sudden, it is a Sign, it comes from a Vein broken in the Kidneys; that which comes from the Bladder, comes slower and in less Quantity. The Cause is Breach of the Blood-Vessels in the Kidneys or Bladder, by Acrimony of Humors or roughness of the Stone.

Cause of an Ischury.

Impotency to make Water comes either through the Palsy or Obstruction of the Nerve, which communicates sense to the Part; or from Diversion of the Spirits and their Disorder, so that the B'adder is insensible of the Provocation by Urine, and so endeavours not to void any, as it falls out in soporous Diseases, the Phrensie and *Deliria*. They blame also the Coldness of the Bladder, which debilitates the expulsive Faculty, and dulls its Sense. Straitness also of the Orifice or Neck of the Bladder, from whatsoever Cause, may hinder voiding of Urine.

This Impotency to make Water may also come from the Kidneys and Ureters, when their attractive Virtue is abolished either by a cold Intemperature, or Obstruction of the said Parts.

Cause of a Diabetes.

IN a *Diabetes Galen*, and most of his followers blame a hot Intemperature of the Kidneys, which makes them draw much serum from the Veins. *Aetius*, besides Heat, blames an afflux of Sharp Humors. Some blame Bilius and Salt Humors, which continually stimulate the Kidneys to Expulsion. *Avicenna* and others, blame a cold Intemperature of the Kidneys, which weakens the retentive Faculty. Others blame the depraved Attraction of the Kidneys.

Cause of Incontinence of Urine.

They say, the chief Cause of Incontinence is in the Sphincter Muscle which has lost its Retentive Force, and is weakened either by a cold and moist Intemperature, by cold Baths, or sitting upon a cold Stone.

§. 5.

Paracelsus holds, That a Stone is bred of Tartar in the Blood and Urine.

He says, the Dysury and Stricture proceeds from the Tartar in the Stomach, and therefore may be cured in the Stomach. If the Urine proceeds from Salt and Sulphur.

Incontinence of Urine proceeds from the Stupefaction of the Parts by a narcotick Sulphur.

He says a *Diabetes* is a dry Urine dissolved, and clef, and exhaled through the Mixture of an acid Salt, placed in the middle of the

this principal Part, that is, a chronic permanent and fixt Salt.

§. 6.

Almont says, the Calculous Matter is *Ductile*, arising from Volatils, or a tartareous ferment and slimy Matter, whereby the *Ductile* is coagulated. He holds, that the Coagulator inhabits in Urine. He likewise holds That the aforesaid ferments in the Bladder either breed there, or are sent from the Blood, whence Ischury and Dysuria proceed.

Incontinence of Urine, or when the Muscle of the Bladder has the Weakness, he holds, that an Acid causes the Strangury or Heat of Urine, in old Men especially. And Dysuria often proceeds from the Stone, an Abscess or Ulcer of the Bladder, &c.

§. 7.

Willis holds, that sometimes the serum sticks so to the Blood, that it cannot get from it, as in Fevers, which he had a bad crisis, Dropsie and Anasarca, sometimes the serum is turned another Way, as in Gout, arthritic and scorbutick humors, Dropsies, &c. On the contrary in a diabetes and pissing much, he holds, That the serum is not done its office, and it continues in the dissolution and over laxness of Blood; as the Suppression does in a Concretion and too thickness of Blood. The Laxness proceeds from an assaite, and the sweet Taste of the Urine is, from some sulphureous Particles

from the Colligation of the solid Parts are mixt with the Salts.

And he holds that the Stone proceeds from a saline fixt Matter, carried from the Blood in the Kidneys with an acid Humor; which fermenting causes Pain, and when fermented, coagulates into a Stone.

§. 8.

Sylvius ascribes a red, calculous Urine to Acrimony and Acidity; for he observes, that though the Urine be made clear, yet Gravel will settle, and stick to the Bottom and Sides of the Pot; generally red or yellow, and seldom white. He thinks, that when this Gravel grows bigger in the Kidneys or Bladder, it encreases gradually, till it grows to a great Stone, unless it be voided before.

He does not ascribe the Congregation of these Stones to heat, but rather thinks that Heat hinders it: because Gravel never settles in the Urine, till the Urine grows cold.

He thinks that Bloody Urine proceeds from the Breach of some Vessel, in the Kidneys, Ureters, Bladder or *urethra*.

He derives Contenance of Urine from a Palsy or Wound of the *sphincter* Muscle.

He makes the Cause of an Ischury to be, the Straitning of the Orifice of the Bladder, or an Obstruction, Compression or Coalition of the Passage, by the Stone or a Caruncle, by a Tumor or Inflammation or *Schyrus* or by a Wound without a ragged Stone or corroding Humors. Or the Bladder cannot contract, because of the Palsy, or of its Fullness and Distension.

sion, by keeping ones Water too long.

The Strangury proceeds from a perpetual Irritation by sharp Humors, or the Stone. An Ulcer proceeds from a Wound, or from Acrimony of Humors.

He derives a *Diabetes* from a sharp Volatil Salt, either received from without or iabred.

§. 9.

THE Cartesians in the Stone do blame either the Abundance or thickness of the Blood, or sharpness of Humors, or acute and angulous Particles of Salts.

In an Ischury and Dysury the Serum is diminished, or the Ferment of the Kidneys is spoyled. Or a Stone, or some viscid Humor, or a *plethora* stops up the Passages.

They derive the Strangury from saline aculeated Particles in the Urine or serum; Pissing of Blood from Solution of Continuity by sharp Particles; and the *Diabetes*, from a Salt precipitating the Blood into a Serum.

§. 10.

Our opinion is, That an acid volatil Spirit is the Cause of Coagulation in the Stone. Thus, some Waters purifie whatever is put into them. I keep an acid volatil Spirit by me, which in a short time turns into Stone whatever is put into it. Thus an acid Volatil congeles Sal Ammoniac. If we may believe *Tachenius*, draw the acid volatil Spirit from the Stone, and pour it upon the Matter again, it will reassume its pristine Hardness. But, may some say, if an acid volatil Spirit

breed the Stone, why does it not destroy the Stone? It is plain, to cause the Stone requires a Dissolvent: for the Dissolvent must be of the same Nature with the Stone, as in Gums, Resins, such things, and in the Mineral Kingdom we see things are always dissolved in their like.

An Ischury arises from Obstruction of the urinary Passage by a Stone or mucilaginous Matter from the spasmodick contraction of the Sphincter by an acrid or great Influx of animal Spirits. Or when the Urine is separated from the Blood, and it be separated, is not carried to the Bladder.

The Strangury hath divers Causes, Internal and external Causes, Acrimony of Urine, Extension of the Bladder or the ureters, various Causes, but especially sharp and corrupt Seed in a violent gonorrhoea.

Inflammation of the Kidneys or Bladder comes generally from a Plethora or from Acridity and Thinness of Blood, or from Gravel or the Stone.

An Ulcer in these parts proceeds from an Inflammation, from a Plethora of Blood or Humors, from a Plethora or from strong Diuretics.

Heat and Sharpness of Urine come from an acid and corrupt Salt, vellicating the urinary Passages.

The Cause of Pissing of Blood is the Breach of some Vessel of the Kidneys or Bladder, by a Plethora or Humors.

Incontinence of Urine proceeds from a Relaxation of the Muscle and Nerves tending to the Bladder from Obstruction, Compression, Wound, Ulcer or Inflammation.

The Cause of a Diabetes is a pe-
culiar precipitating the Blood.
which also blame the Passages from
the Stomach through
the Intestines; for by these patent
Passages all that is potent passes
off. The largeness of the
Arteries of the Kidneys and their
acid Ferment may contri-
bute much to it. The Crisis of
the Disease may occasion it. The
Causes are too much
acrid, specially acid, Diuretick
and Physick, Suppression of
Necessary Evacuations, &c.

§. II. Prognostick.

The Stone in the Kidneys is a
dangerous Disease, and if it is
suppuratory, it is incurable; and
in men, according to Hippo-
crates, lib. 6. f. 6. The greater and
longer the Stone, the more pain-
ful it proves. If the pain cause
Inflammation and Fever, or if
it wound the substance of
the Kidneys, it is dangerous; if
it will yield to no Remedies,
the external parts be cold, if
the Face be pale and in cold
Sweats, with Faintness and a low
Pulse, Death is at hand. I have
observed it to be a good Sign,
when the Urine is at first clear,
and afterwards grows thick, and leaves
a Sticking to the Por. When
the Stone sticks in the Ureters,
the pain is most exquisite, and
the Patient generally dies.

Boys are most subject to the
Stone in the Bladder, and old Men
to the Stone in the Kidneys. If
the Stone in the Bladder be big,
there is no other way for Cure,
but cutting by a skilful Lithoto-

Fat, gross and sedentary People
are most subject to the Stone. On-
ly Women, because of the Benefit
of their Passages, and of their Men-
ses, are less liable to it than Men.

If an Ischury proceed either
from the Secrecion of Urine being
hurt, or from a pottick Austerity,
or from a great Stone stopping
the Ureters, or from a Palsy of
the Nerves, or from a Hurt in the
spine, *os sacrum* or Loins, or from
a Disease in the sphincter Muscle;
it is bad. It is also a very bad
Sign, if a *tenesmus*, or Hiccough
come upon this Disease, or if a
ferid urinous Smell come out at
the Mouth or Nose. On the con-
trary it is easier to cure, if it
come from external Causes, or from
some slighter internal.

If a Strangury come from puru-
lent Kidneys, it proves mortal;
if from drinking too much or new
Drink, there is no great danger;
for Hippocrates says f. 7. aph. 48.
*Drinking of strong Wine and Letting
of Blood cures the Dropping and Dif-
ficulty of Urine.*

The event of an Inflammation
is dubious and dangerous. When
it turns to an Abscess a slow Fe-
ver follows and an incurable Ul-
cer, which attends a Man to his
grave. It is a good Sign, when
the Hæmorrhoids open of them-
selves or when one bleeds at the
Nose, or when Women have their
Menses: also if in the encrease of
the Disease a white and glutinous
Sediment appear in the Urine,
with an abatement of other Sym-
ptoms.

Ulcers in the Kidneys and
Bladder are difficultly cured in old
Men.

Pissing of Blood is dangerous, be-
cause it may breed a Dropsie or

Consumption, or if it do not, an Ulcer; and if it be not impossible, yet it is difficult to be cured.

Incontinence of Urine and the *Diabetes* are difficult to cure: for if an incontinence be inveterate and happen to old People, or come from a Palsy, or any other grievous Disease, it is incurable. But when it happens to Children or people in full Strength, or from an external Cause, or from deep Sleep; by change of Diet and in process of time it may be cured.

Young People are most subject to a *Diabetes*, and is the easiest to cure in them. But old People may have it; and in them it is incurable, or if it be inveterate. Now and then it is cured only by Alteration of Diet.

§. 12. *Dietetick Cure.*

IN the Stone, and in all Diseases of the Kidneys and Bladder the *Air* must be clear and temperate. The *Meat* must be easie of Digestion, and lubricitating. The *Drink* must be a small white Wine, especially a *Moselle*.

In Pissing of Blood, Incontinence of Urine and a *Diabetes* the Diet must be more astringent. The *Air* must be dry and serene. The *Food* must be incrassating and astringent, but of good Juice. *Drink* must be sparing; a little red astringent Wine may be allowed, and some Martial Astringent may be put in it. Abstain from Drink, as much as may be, for temperance is the best Cure. *Rest* must be enjoined. *Sleep* must be moderate, one must not lie on his Back. The *excreta* and *retenta* must be according to Nature. The *Passions* of

the *Mind* must be moderate. Temperance in *Venus* is always

§. 13. *Pharmaceutick Cure.*

THE Galenists are for inducing and evacuating the gross pituitous Humor, that turns to Stone. In the Fit they give Clyster, and out of it they give In the Fit they commend Lincticks, and Baths. They give Brothes, oyl things and Emollients. When the Pain is abated they give Lithontripicks.

In an Inflammation of the Kidneys or Bladder they use the same Method as in other internal Inflammations.

In an Ulcer of these parts they give Vulneraries.

In bloody Urine they check the Efflux of Blood, they heal the Breach of the Vessels, and they strengthen the Parts.

They cure an Ichthy and Hematuria, by altering the Intemperature, removing the Stone, and dissolving the Phlegm, and by altering the Diet that it may not breed again. At this end they use Lithontripicks and they strengthen the Parts.

In a *Diabetes* they prepare the Urine, then purge, they make Revulsion of the Humors, and then amend the Intemperature of the Kidneys and Liver, and strengthen them.

They cure Incontinence of Urine by Aniparalyticks, giving Urine and then Phlegmagogues.

§. 14.

IN the Cure of the Stone the *Practisists* use many Specifics. *Paracelsus* cures the Dysuria and Strangury

Strangury with Spirit of Salt and
of Juniper.

In an Ischury he commends
Tincture of Nitre, Anti-
acid Salt.

He cures a *Diabetes* by Anodynes

§ 15.

Mont thinks a Liquor may
be had, which will without
dissolve Gravel or the
in the Stomach. But to
breaking a confirmed Stone
in the Bladder is but the Bragging
of Physicians, and nothing else. For
Physicians can only force the
urine by Diureticks, and loosen
it with Moisteners.

In an Ischury to stimulate the
urine, he gives Diureticks.

He cures an Ulcer by Vulne-

rary he saturates
with predominant Acidity with

In a *Diabetes* he gives Ano-

§ 16.

There are several Diureticks,
whose Basis is a volatil Salt;
several, whose Basis is an alka-
line Salt.

In violent Ischuries he uses
Diuretic Powders.

He uses some Diureticks whose
Basis is a fixt Salt, and some whose
Basis is an Acid.

The Cure of a *Diabetes* his in-

structions are, 1. To check
the Efflux of the Blood by increas-

ing Medicines. 2. To recover
the crasis of the Blood.

To increase, cool and qualifie

by Hypnoticks. He commends a
Milk Diet, Emulsions, and Medi-
cines endued with a fixt Salt.

§ 17.

Sylvius says, the Stone must
either be expelled or dissol-
ved. He expels by Diureticks;
And he says 10 or 12 Drops of
Spirit of Nitre in a Decoction of
Grass dissolve the Stone in the
Bladder.

If gross Phlegm cause an Ischu-
ry by stopping the urethra, then
he uses a Catheter or a Syringe.

In a Dysury, when the Orifice
is exulcerated or corroded, he
magnifies several Sorts of Balsams
of Sulphur.

In the Strangury he com-
mends testaceous Powders and vo-
latil Salts.

In Ulcers of those parts he com-
mends Balsam of Sulphur.

In Pissing of Blood he com-
mends Vulneraries.

He says, the cure of a *Diabetes*
consists in contempering the sharp
volatil Salt by oleous things and Em-
ulsions, and by Milk.

§ 18.

THE Cartesians in the Stone
let Blood, give Diureticks and
Clysters. In the Strangury they
give Precipitants, things to im-
bibe an Acid, Anodynes, &c.
In a *Diabetes* they commend A-
stringents and Absorbents mixt with
Opiates, to imbibe the vitious Salt,
which precipitates the Blood into
serum.

§ 19.

IN the Stone in the Kidneys we give a milk Clyster, which does as well as one of many Herbs or one of Milk, Turpentine and the Yolk of an Egg. Salt must not be put in them, because it is good to keep them long. Fomentations, Oynments and Baths may be used. If any thing can be expelled, we may give Diureticks.

Wedelius uses this following ;

Take of *Sperma ceti*, Crabs-eyes each half a Drachm, Cinnabar of Antimony one Scruple, volatile Salt of Amber, four Grains, *laudanum opiatum*, half a Grain, Trochiscs of *alkekengi* with *opium* half a Scruple. Mix them. Make a Powder for four Doses,

In the fit when the Pain is violent, an Emulsion, or some Opiate will be good.

Out of the Fit we must endeavour to extirpate the Coagulator. And we must always have regard to the Stomach. Therefore Stomachick Medicines will be good. Some say, there is nothing better, either for the Cure or Prevention of the Stone, than this Antinephrick following ;

Take of Seed of Anise, Parsly, Dill, Leaves of Saxifrage each half an Ounce, Pike's Jaw, Crabs Eyes, Seeds of Hips each one Ounce. Mix them. Make a Powder. The Dose one Drachm three days before the New of the Moon.

In the Stone of the Bladder the same Cure must be used. A Clyster may be given, and Tripticks inwardly. When the Stone is large, there is no Cure but Cutting.

In an Inflammation of the Bladder things are good inwardly and outwardly.

Ulcers proceeding from the Bladder are best cured by Milk, mucilaginous Vulneraries therein.

And in all Ulcers from the Bladder Humors Vulneraries are good.

In an Ischury search for the Cause. In this case the same Method is used as in the Stone. Diureticks be given, and warm things be applied to the Pubes. These are excellent Pills ;

Take of *Venice Turpentine* a little at the Fire two Drachms, Juice of Liquorish, Powder of the same each one Scruple. Mix them. Make Pills, as before. Pease, roll them in Powder of *millipedes*.

In the Strangury Acrimony must be corrected ; and all things good, that are good in the Stone. A Purge of Cassia, Jalap and Gar may be given in a Bolus.

In Pissing of Blood, 1. Let the Patient rest. 2. Give tempering, incrusting, anodyne, consolidating, and strengthening Medicines. Agrimony, the best of Vegetables ; of the best and Flowers of St. John's Wort. Traumatick Essence may be made. *Laudanum opiatum* is excellent.

If Incontinence of Urine proceed from the Palsy of the Nerves, wine Oynments and Astruc

adder. If from the Laxity of the Sphincter, and over Extensiveness of the Fibres, heating, drying, stringent and antiparalitic Medicines will be proper. The Specifics are Mastich Wood, Hen's Lizards, Ashes of a Hedgehog, the Umb of a Sow boyled or roasted and eaten. A Goat's Bladder dried in an Oven, a Drachm of it given in Powder, a Fish found in the belly of a Pike, Powder of a burnt Pearl, *Medulla lapidis, Lignum aloes.*

In a *diabetes* all gentle astringent Medicines are proper. If we purge, it must be gently. Opium is good. Diaphoreticks, which are also Diureticks, must be avoided. Cooling Clysters are good. Mucilaginous things, as Gums are proper. Milk, or Whey, wherein Flints or Steel have been quenched, are good. Externally cooling things may be applied to the Loins.

K k 4

CHAP.

CHAP. XIV.

Of the fixt and running Gout.

§. I.

THE Gout is called *arthritis*, *passio arthritica*, by Pliny *morbus articularis*, by Celsus *dolor articulum*, by Paracelsus *morbus tartareus*, some have jocularly called it, and aptly enough *dominus morborum* and *morbus dominorum*, it is barbarously called *Gutta*, from whence perhaps came our *Gout*, because it is caused *ex defluxu guttatim facto*. It may be defined to be, a Pain of a Joynt, and of the parts about the joynt, arising from some extravasated acid Humor, which irritates the Fibres encompassing the Joynt.

Difference.

THE Gout is a general name, whereof there are four sorts. 1. *Chiragra*, the Gout in the Hands. 2. *Gonagra*, in the Knees. 3. *Ischias*, the Sciatica or Gout in the Hips. 4. *Podagra*, the Gout in the Feet. But there is no part free from it. We may add a fifth sort, called *arthritis vaga* or the running Gout, when the Pain is not fixt in any one place, but runs from one

part to another. A scorbutick removes, but an arthritick corrodes and stretches the Limbs. The Gout and Stone are so allied, that they seem to be of the same extraction. He that is troubled with the one is generally troubled with the other; and the one turns into the other.

Some Gouts, as most tartarous Diseases are, is hereditary from Parent to Child. Some are venitious which come from various Causes in the Body.

§. 2. *Part affected.*

SOME take the Brain for the original of this Disease, others the Liver, Pancreas and Gall. Some as Helmont and Sydenham in his late tract, accuse the Stomach. In our Opinion all the sensible, nervous and membranous parts are the Subject of it, but especially the *osseum*. Willis concludes that the principal Symptom, viz. Pain, that it is a Disease of the Head and nervous kind. So Cornélius Piso, and Fernellius place the Cause in the Head.

§. 3. *Diagnostick.*

When a Gout is curling, there is a Numbness in the Part, or a more exquisite Sensibility than usual, which makes it sensible of the least Touch, a Heat and Redness sometimes with a Swelling, sometimes without; a Fever sometimes preceeds. When it comes, the Patient feels an inflammatory Pain and a Swelling in the Joynt, and he feels as if his Part were stung with Ants. If it comes in the Hands, all things feel other than they are. It usually begins in the Great Toe of the Foot first, and thence it creeps to the Knees and other Parts. There is Impotency of Motion. They have a Fever either before or after the Gout, without a cold Fit, with the Head-ach, Thirst, Faintness, and Loss of Appetite. In the Course of Gouty Persons usually Gravel sticks to the Sides of the Bladder. In the Disease, when inflammatory Knots appear. In a scorbutic Gout, spots like Flea-bites appear, as if they were stung with Ants. In the *sciatica* there is a Pain on that Side, and they cannot move that Leg. The wandring or running Gout is like an *ignis fatuus*, sometimes here, sometimes there, and when it abates a little, it returns unexpectedly.

§. 4. *Cause.*

The Galenists say, the proper Cause is an Humor, or a weakness of the Part; they consider four things, the Humor, the part Mandant, the part Recipient and the Way the Gout comes. They say the

part Recipient is the Joynts or Coarticulation of the Bones, in which they presuppose an infirmity, otherwise they would not receive the Humors. Some say, the part Mandant is one, some another, and some say the whole Body is such. They say the Matter is only the Excrement of the Brain. The Way by which the Humors flows they think, is not only between the Flesh and Skin (though this is most frequent,) but by the Continuity of Membranes, Muscles, Nerves, Veins, or Arteries. The antecedent Causes are all such things as may breed such Humors.

§. 5.

Paracelsus makes the Gout to be a *tartareous Disease*, or *Exaltation of all mineral Salt*, or *of an acid Liquor in the Synovia*. And the Pain in the Gout differs according to the Difference of the various Salts, whence it proceeds.

§. 6.

Helmont accuses the Stomach principally, and proves, that the Gout proceeds from an Acid infecting the *Archeus*. When this Acidity is got into the *Synovia*, it curdles like Cheese and grows opaque. Now the *Synovia* is nothing but a pellucid Mucilage, such as runs out of a Calf's Feet when they are cut off. And this *Synovia* hardened is the chalky Matter so familiar to gouty People.

§. 7.

Allis holds, that the Cause of the Gout is never Blood, because arthritic Swellings

Swellings never suppurate, but it is a mutual Effervescence in all the Humors, proceeding chiefly from the Acidity of the nervous juice, and saline lixivial Feculences, which are so corrosive, that lay but a Worm on the place pained, and it will dy.

§. 8.

Solbius derives it from the Acidity of the pancreatick Juice, and some fault in the Bile and salival Humor meeting in the Guts.

§. 9.

The Cartesians ascribe it to the angular Figures of divers Salts in the Blood, which being discharged upon a Joynt, cannot pass the Pores thereabout, and so vellicate the Fibres and cause Pain.

§. 10.

IN this Disease we reckon the fault lies in the ill Digestion of Food in the Stomach, *Viscera* and Glands designed for Digestion, by acid and lixivial Particles. Now the Matter of these acid and lixivial particles is a volatil serum in the Arteries, an ill digested Chyle, or a stagnating *lymphæ*, afterwards extravasated, and in time forced into the habit of the Body, which causes the Swelling. The tormenting Acid sometimes coagulates the Blood, and fixes the Humors into a Chalk in the Joynts.

Among the procatarrick Causes the chief is Wine, the Tartar whereof sticks in drunkards fingers. *Venus*, Studies, and Grief may occasion the Gout. For few Fools are troubled with it.

§. 11. Prognostick.

THe event of this Disease is uncertain, both in regard of the Fit and the whole course of the Disease: For a Fit sometimes lasts long, at another time it goes quickly. When the Gout is fixt, it is hard to cure.

Tollere nodosam nescit medicina gram.

An hereditary Gout is reckoned incurable. *Hippocrates* says, That before the use of *Venus* men have not the Gout, nor Women before their *mensæ* leave them. Foods are free from it. It is good to have *Hæmorrhoids*. The Gout is more pertinacious in a scorbutick or cheestick Body, or in one weakened by a precedent Disease. In old men it sometimes occasions Palsy. If the Gout settle in the Nape of the Neck, at the beginning of the spinal Marrow, it kills the Patient. Sometimes there sue terrible Symptoms, *Heuræ*, Shortness of Breath, Swelling, Convulsions, Palsy, Apoplexy, Madness. Young men, if they be not much given to Wine, Women, may be cured by proper Remedies. But there are few Patients to be met with, that observe Rules. The Gout and Stone often turn one into another.

§. 12. Dietetick Cure.

THe Air must be serene, and temperate. Juniper is good to correct it, and for Powders for Defluxions *Meat* must be easy of Digestion.

and all salt Meats must be avoided. The Drink must be Beer well wrought, or Sydenham's Decoction. Wine must be very good and a little of it must be used, otherwise none at all. Venus must be avoided. Sleep and Watching must be moderate. Exercises, as Riding in a Coach or on Horse-back, is good, and let not a man, if he can help it, confine himself to his Chair. The Mind must be kept cheerful with good Company and Musick. For they report *Limeni-* mus, a Musician of *Thebes*, that by the sweetness of his playing he moved People: *Cardan* mentions him. But our Musick now is not of such virtue. The Patient must not study too much. The *caveta* and *retena* must be agreeable to Nature,

§. 13. Pharmaceutick Cure.

The *Galentists* give Clysters, then they give Preparers of Bile or Melancholy, which ever it is that offends; or mixt, if the Humors are mixt. When they are prepared, they purge with Medicines proper for the Humors, and with Arthriticks. Sometimes they vomit. If Blood abound, they bleed. They commend Frictions, Ligatures, and Potential Cauteries. They give Sweats. They use dissolving, discutient and emollient Medicines. Last of all they apply strengthening things to the Part.

§. 14.

Paracelsus says, three things are requisite to the perfect Cure of the Gout, Purging, Opening, and giving Specificks.

§. 15.

Helmout says, That not only the Acidity must be looked after, but the seminal Character of the Gout must be removed from the Spirit of Life.

§. 16.

Allis, who reckons this among the Diseases of the Head, has these two curative Intentions. 1. To take away the Solution of Continuity. 2. To check the irritation of the Fibres, and the incandescence of the Spirits therein. To discuss the Matter already impacted, he commends Evacuators and Alteratives. He applies a defenstative Plaster to the Part. He gives Vomits. He gives testaceous Powders in the Fit, and Powders of sharp Vegetables, which are alexeterick in this Disease. He uses Anodynes outwardly, and in extremity of Pain, Narcoticks. He applies Fomentations, Bags, Plasters. Sometimes he gives Opium inwardly. For prevention every Spring and Autumn he purges or vomits, and at some distance of time repeats the same thing. He bleeds or opens the Hemorrhoids. He advises Issues in the Arms and between the Shoulders. He gives altering Antidotes made of arthritick Medicines endued with a Volatile Salt and Balsamick Sulphur, and bitter and astringent things, such as

Ger.

Germander, Groundpine, Centaury, Root of Gentian and *aristologia*. He advises a Diet Drink of the Woods, Ivory, Harts-horn, &c. He likewise advises a Milk Diet for three or four Months, taking no other food morning nor evening but Milk warm from the Cow; about noon the Patient may eat Oatmeal or Barley Grewel with a little Bread in it. But this Diet will not agree with all Men.

§. 17.

Solbius, to correct the acid and lixivial Acrimony, uses Narcoticks and Anodynes. When an Acid alone offends, he commends fixt lixivial Salts, and volatils also. When the Humors are turbulent he purges or vomits. Then he gives Diureticks and Sudorificks. He applies divers topical Medicines. When the part is weak, he cures it by Medicines, that have a volatil Spirit and an aromattick Oyl in them.

§. 18.

The Cartesians make dull the angular and saline Particles. They evacuate, and strengthen.

§. 19.

Our opinion is, that in a Fit of the Gout. 1. Pain must be asswaged. 2. Strength maintained. Adodynes and Opiates assuage pain, inwardly and outwardly. We must then abstain wholly from Purges, because they would exasperate. For Prevention I use to give Sydenham's Electuary.

Take of Roots of *Angelica*, *campanulatus*, *Masterwort*, *campanula*, Leaves of *Wormwood*, *lesser Centaury*, white *hound*, *Germander*, *Groundpine*, *Scordium*, *Calamint*, *Fennel*, *Meadow Saxifrage*, *St. John's Wort*, *Golden-rod*, *Mother Thyme*, *Mint*, *Sage*, *Penny-royal*, *Southernwood*, *Flowers of Camomil*, *Tansy*, *Lily Conval*, *Saffron*, *Seed of Treacle*, *Mullein*, *Garden Scurvy Grass*, *Caraway* and *Juniper Berries*. Let them all be gathered in their proper Seasons, kept by in paper Bags, and powdered. Let four Ounces of each of them be made into an Electuary with a Syrup made of Canary Wine and Sugar. Let him take two Drachms morning and evening. Or in defect of this;

Take of Conserve of Garden Scurvy Grass one Ounce and an half, Roman Wormwood and the yellow of Orange Peel each one Ounce, candied *Angelica*, cubed Nutmeg each half an Ounce, Venice Treacle three Drachms, *pulvis ari compositus* two Drachms. With a sufficient quantity of Syrup of Oranges make an Electuary. Take two Drachms twice a day, drinking five or six Spoonfuls of the following Water after it;

Take of Horse radish Root sliced three Ounces, Garden Scurvy Grass twelve Handfuls, Water Cresses, Brooklime, Sage, Mint, each four Handfuls, six Orange peels, two Nutmegs bruised, Brunswick Mum six Quarts. Draw off by a Still four Quarts for Use.

All Antiscorbuticks are good, especially Buckbean: for I have had experience of it.

I am not for Bleeding. Blisters

are proper, and actual Cauterics with

Hippocrates burnt with raw

Baths and Plasters are good.

Out of the Fit, regard must be

had to the antecedent Cause, name-

ly a sharp extravasated *lympha* and

the weakness of the Joynts. The

weakness may be corrected with Juice

of such, the foresaid Electuary,

and with Buck bean variously pre-

pared. A strict Diet must be kept.

A Rheumatism is reckoned among these Diseases, and is cured much like the Gout: But in it Bleeding is proper.

In the running Scorbutick Gout, it is good to take a Meal-sack, whose Pores are filled with Meal, and heat it, and wrap the Body in it, for it is emollient and asswages Pain. The best course is a sudorifick Diet, for a Cure by Sweat holds freest from Relapse, which is worse than the original Disease, according to the *Arabian Aphorism*, *Omnis recidiva est deterior sua radice.*

CHAP.

C H A P. XV.

Of the Venereal Disease, Gonorrhœa and Nocturnal Pollution.

§. I.

SOME call the Venereal Disease the *French disease*; because when *Charles the eighth of France* laid siege to *Naples*, it was first observed in *Italy* in their Camp. Others say, that in the Year 1495. when *Christopher Columbus* with fifteen hundred men arrived at *Santo Domingo* in the *West-Indies*, where the People had the Pox, the Spaniards laid with the Women, and so were infected; and when they returned, gave it to others at *Naples*, and so it came to be called *morbis Neopolitanus*. Some say, the *Peruvian Indians* used to lie with all manner of Beasts, and by that diversity contracted a strange Ferment. *Helmont* (speaking of this Disease) brings in a Comparison of a Horse sick of Worms, how he infects other Horses, and he thinks some wicked Sodomite had to do with such a Horse and so came the Disease. *Casalpinus l. 4. Art. Med.* refers the first Contagion to Greek Wine infected with the Blood of leprous persons, sold by Spaniards to the French at a certain Town of Mount *Vesuvius*,

in the famous Expedition to *Naples*. *Paracelsus* derives the Original of this Disease, from a leprous French Man's lying with a Whore full of Buboes in the Exaltation of Venus, at which time also her Menstrual Blood just come. These infected themselves when they came near. And so the Disease was bred between Buboes and Leprosie, as a Mule is got between a Horse and an Ass. Some call it *mentagra* and *puendogra* and *Indicus*.

This is a contagious Disease, got most usually by lying carnally with an infected Person. But it may be got other ways: A Mother may give it to her Child, and the Child to the Nurse. It may be got by kissing or lying bed together, as by any contact of an infected Body. Some say it may be got by lying with a leucorrhœous Women, whether she be sound or diseased. But this is false.

It may be described to be a crasie of all the Humors in the Blood, consisting in a volatill corrosive quality.

AGonorrhœa is either virulent or simple. A virulent one may be cured, low the simple, if it last long.

at last the white seminal
turns yellow and virulent.
It is usually got by coition. A
simple *Gonorrhœa* is when the seed,
it comes (which is improperly
called Seed) is watry, thin and
like Whites of Eggs, with-
out Pain, or Lust, yet if it continue,
it will waste the Body, and weaken
the general Parts.

Nocturnal Pollution is an Ex-
cretion of Seed with pleasure in
Sleep or Dream.

§. 2. Part affected.

Nothing takes the part affect-
ed in the Venereal Disease
but the Glands, formerly they
thought it to be the Liver. Some
think it is the Spleen, others the
Lungs, others the Brain. I think
the Subject is all the lymphatick
Vessels and in a confirmed one the
arterious, venous and ner-
vous kind.

In a *Gonorrhœa* and Nocturnal Pol-
lution the lymphatick and sangui-
ferous Vessels are affected, but chiefly
the Vessels wherein the seed is
deposited, and kept for Ejaculation,
when they are corroded, the
seed must be evacuated.

§. 3. Diagnostick.

THE chief Sign is a virulent
Gonorrhœa, there is a Dulness of
the Eyes, Pain in the Bones, little
Heat in the part first infected.
When it is confirmed, there is a
violent Head-ach, Pains of the
Arms and Legs between the Joynts,
worse at night, Heat and
Inflammation in the Throat and Palate,
Tenderness. There are sometimes
Convulsions, Epilepsies, Madness,
Melancholy, Pustules in the Head,

Fore-head, Nose, Lips, and stin-
king Breath. There are *tophi* and
Tubercles in the Arms and Shin-
bones. And to hide their Disease,
some will call it the Head-ach,
others the Scurvy, a Cachexy, a
Fever or Itch. When the Disease
is desperate, the Hair falls, yea, off
the very Beard and Eye-brows the
Teeth fall out, they have the Stran-
gury; and sometimes their geni-
tals are quite eaten away. There
are Buboës in the Groin, *condilo-
mata* both in Women's anus and Pu-
dendum and in Mens Prepuce.
There are several other Signs but
these may suffice.

The principal signs of a virulent
Gonorrhœa are Heat and Pain in
making Water; the Urine is white
with string; in it, there is a con-
tinual Erection and Irritation to
Venus, there are some Ulcerous
Pustules in the Privities, and o-
ther Signs before mentioned. A
Gonorrhœa may be known to be
malignant by the Putrefaction and
stink, and by the yellow, green and
corroding Matter that comes a-
way.

The pathognomonic signs of
nocturnal Pollution are Venereal
Dreams with the Excretion of
Seed, especially when one lies on
his back.

§. 4. Cause.

SOME of the old way lay the
Cause of the Venereal Disease
upon the Humors; others upon
an occult Quality. They make
the Cause of a *Gonorrhœa* to be a
pituitous Cacochymy. They make
the immediate cause of Nocturnal
Pollution to be the Irritation of
the expulsive Faculty by bad seed,
and the mediate, are either humo-
ral or flatulent.

§. 5.

Heracellus says, this Disease is bred by Sublimation of Mercury, by Heat, not excluding the Salt: for Mercury has its Acrimony and Corrosiveness from Salt, and a volatil Salt is never separable from Mercury.

In a *Gonorrhœa* he accuses a dissolved Salt.

§. 6.

Helmont makes the Cause of the Venereal Diseases to be a poysonous Ferment.

§. 7.

Sylvius, derives it from the Acrimony of an acid Spirit, and partly from a lixivial Salt.

§. 8.

THE Cartesians blame sharp, pungent, saline Particles in the Humors and Seed, and they derive all the Symptoms from thence.

§. 9.

We think, that the poyson in the Venereal Disease does principally consist in a volatil Acidity, but there is also a viscid Venereal Ferment joyned with that volatil Acrimony. This is the Cause of a virulent *Gonorrhœa*. And in nocturnal Pollutions it is a saline volatil Vertue in the Seed which causes Titillation.

§. 10. Prognostick

THE Venereal disease and *Gonorrhœa*, the newer they are the more easily they are cured. They are more difficult to cure in a diseased or foul Body, than in a healthy Constitution. The Pox with hoarseness is hard to cure; And a virulent *Gonorrhœa* with Swelling of the Privities, a stinking Seed, or if there be Ulcers or Caruncles in the urethra is hard to cure. These Diseases make people barren. They are bad in old men. Women are so much troubled with them, because they have the benefit of *menstrua*. They are best cured in a hot Country or Season. A virulent *Gonorrhœa* turns sometimes to the Pox, and sometimes to a simple *Gonorrhœa*, which is difficult to cure.

A simple *gonorrhœa* and Nocturnal Pollution are not dangerous, oftentimes tedious Diseases.

§. 11. Dieterick Cure

THE Air must be hot, pure and serene. The Meat must be easie of Digestion, grateful, sweet, all salt and sharp Meats must be avoided. Drink must be a Decoction of the Woods and Roots. Or Physick Ale will be wrought. Wine is very bad in this Case.

Sleep must be moderate. Lie on your Back, lest the Vessels of the Kidneys grow hot. In a *Gonorrhœa* it is best to lie with the Head high, and then he cannot easily turn on his Back. I have known several cured so. Feather Beds must not be lain on, nor Quilts.

He not too much Exercise.

Let the *acuta* and *retenta* be in their natural State.

The Passions of the Mind must be in order. They that are troubled with Nocturnal Pollutions are advised to marry.

12. Pharmaceutick Cure.

Catarrhs, If the Venereal Disease be new, and if there be *catarrhus*, let Blood, and give a Purgative or a Clyster; then prepare gross Humors, and wash with extract of black Soap. Afterwards they sweat. If indicated, after they have been purged, they give a Decoction of *guajacum*, *sarsaparilla*, and *sassafras*. They drink in a Stove, or in Bed well covered with Clothes, to sweat well, change their Linen, dry themselves well, walk a little in their Chamber, and four or five Hours after they have taken the Medicine, go to Dinner.

Nocturnal Pollutions, having tried Universals, they go to the internal and external, using Vulneraries:

§. 13.

Alexisius l. 2. de vita longa, c. 12. observes three things, Purgative, Cure, and Conservation. He begins with Mercury. He cures with *placibulum*. In a *Gonorrhœa* he purges with Milk of Turpentine, which is made thus.

of turpentine one Spoonful, the white of an Egg, Wine two Spoonfuls. Beat them together in a Pewter Plate.

He stops it with such Medicines as he stops other fluxes withal.

§. 14.

Helmont thinks, the Venereal Disease can only be cured by Salivation with Mercury. He magnifies his *Mercurius diaphoreticus* in this Disease. In a *Gonorrhœa* and Nocturnal Pollution he commends divers Diaphoreticks made of Mercury, and Vulneraries, to imbibe an acid.

§. 15.

Sylvius has a twofold Cure of the Venereal Disease; an universal and a particular. The universal consists in correcting the acid Spirit, and in expelling it by convenient Ways, which he does, 1. By spirituous volatils. 2. By oleous and fat things. 3. By lixivial fixt Salts. 4. By watry things. Then he evacuates by Salivation, Sweat, and Purging with Phlegmagogues. Mercury and *Colocynthis* are his chiefest Medicines.

The particular cure belongs to the Symptoms. A *Gonorrhœa* is cured by the same Medicines. And the rest of the Symptoms are cured by Antivenereals and such things as you may meet with in their proper Chapters.

§. 16.

The Cartesians use the same Medicines, to blunt their purgent saline Particles.

S. 17.

Our Method of Cure has three Indications. 1. The Depuration of the Blood, by throwing off the Venereal Poyson, namely the corrupt Acid. 2. The Preservation of the Parts from Corrosion by this Acid. 3. The Mitigation of the Symptoms and support of Strength. The Blood is depurated 1. By volatil, balsamick Salts. 2. By mild aromatick Oyls. 3. By terrene and metallick Medicines, or Medicines endued with a volatil Salt, or resinous things. The Poyson is thrown off by those things and by Diaphoreticks, Diureticks, and Salivation.

If the Body is Cachectick we may begin with Purges; and Antimonials, that Purge downwards, are here Specificks.

When the Body is Purged we must give appropriate Sudorificks.

Take of shavings of Wood of *guajacum* six Ounces, Sassafras two Ounces, the Bark of both each one Ounce, Root of *china*, *Sarsaparilla* each ten Drachms, Raisins stoned six Drachms, Liquorice scraped one Ounce. Boyl them in fair Water. To forty Ounces of the colature add of simple Treacle water one Ounce, Syrup of Buckbean one Ounce and an Half. Mix them. The Dose is four Ounces, three or four times a day, and sweat must be expected.

Eorellas extols crude Antimony.

Take of crude Antimony, *sarsaparilla* each six Ounces. Tie the

Antimony in a rag, put it in the *sarsa* into three Poties of Water, wherein the green flesh and husks of forty green Nuts must be hanged. Boyl them a third part. Let the Patient drink of it after Meal, Morning, Noon, and Night.

The Diet Drink may be continued for some days, yet we need a smaller Decoction may be made of the remainder, which may serve instead of Beer. When the Patient has done Sweating, let him be wiped with warm Clothes, give him a Cordial, and then he may go into the open Air about Noon. Every ninth day he must purge. The Diet Drink must be continued till the Patient come to himself, and all the Symptoms are gone. A spare Diet must be kept all the time. I communicate this as an experiment to the curious. I have cured several Patients by giving between half and a whole Drachm of the true fat of Vipers in Colosse of Roses or Fumitory for some time. Gum *guajac* being half a Scruple and a Scruple is a good Remedy.

Salivation may be raised in this manner.

Take of *turperbum minerale* between three and five Grains, *Mercure dulcis* six Grains. Make a Powder. Give it for several days till it raises a Salivation.

Or it may be raised externally

Take of Mercury killed with falling spittle, with Oyl of Turpentine, or Lilies, or Worms each Ounces, *unguentum de Alabastris Fernelii* half an Ounce, Oyl of

Amber one Drachm. Make an Ointment, wherewith the Joynts and Soles of the Feet may be rubbed, after the places have been first rubbed with a cloth.

This anointing may be performed once a day in the morning, and after one has eaten an Egg, sup a little Broth. It is safer to salivate by internal than external Medicines.

While the Salivation lasts, they must neither change the hot House, Bed, nor Shirt; and they must bear Purging and Bleeding. Salivation usually arises about the fourth or Fifth day, sometimes till the Fourteenth, and when it begins it is usually over in Fifteen days, all which time the Patient must be kept with Chicken Broth, &c.

For their ordinary drink Patients may drink a Decoction of the Woods.

We will briefly treat of the symptoms. A *tentigo* may be Cured with Ointment of Roses and *Mercurius dulcis*.

A *bubo* in the Groin, with *emplastrum Vigonis cum Mercurio*.

The nodes, by discutiens, discussing Plasters.

This is good for breakings out;

Take of native cinnabar, *sacchar. tinclur. sperma ceti*, camphore each a like quantity. With balsam of Peru make a Liniment.

In rottenness of Bones phlegm of Vitriol, not over Sharp, is good.

Ulcers in the *sinus muliebris* may be cured with *unguentum diapompholyge* or *rosatum* with *Mercurius dulcis* and *saccharum Saturni*. *Unguentum de Minio* mixt with an amal-

gama of Saturn and Mercury is good to heal.

In Pains of the Limbs *emplastrum Vigonis* mixt with *emplastrum nervinum* and Balsam of Peru, is good.

In a Venereal Caruncle in the urethra, Universals premised, this Liniment will be proper;

Take of Honey burnt to ashes, Turkey, prepared, fresh Butter, washed in Plantain water to get out the Salt, yellow wax each an Ounce, burnt Alum half a Drachm. Mix them, make a Liniment.

With this Liniment spread a rag, covered on the inside with white Wax, of a convenient length and wideness, with a long thread run throw it, apply it to the Caruncle in the urinary Passage.

Ulcers in the Mouth, and anus may be cured with *aqua theriacalis camphorata*, or *balsamus sulphuris arisatus*.

The cure of a virulent gonorrhœa differs not much from the cure of the Venereal distemper. First therefore he may purge;

Take of Powder of Rhubarb twelve Grains, Venice turpentine two Scruples, *Mercurius dulcis* twelve Grains. Make them into Pills. For strong People a grain or two of *Mercurius vitæ* may be added.

And then he may continue in a Diet Drink, as formerly.

In a simple Gonorrhœa *Mercurius dulcis* is good. The Dose may be extended to fifteen Grains. A Drachm of boyled Turpentine in the yolk of an Egg is good. Then gentle Astringents will be proper. Gum, Amber, Balsam of copaira, cuttle

cuttle bone, Tincture of steel, *tinctura antiphthisica*, &c. are specifics.

The Loyns, *perinaum*, *scrotum* and *anus* may be anointed with some proper Oyntment.

For pain, the *penis* may be dipt in sweet Milk.

Injections also of milk with proper things boyl'd in it, are good.

In Nocturnal Pollutions, the aforesaid universals premised, Diaphoreticks, Absorbents and Precipitaters may be given.

Moderate Astringent Specificks are proper, such as *tinctura antiphthisica*, Tincture of Coral with phlegm of Vitriol, &c.

If these will not do, we must have recourse to Opium. *theriaca caelestis* and a little Turpentine, taken often, cures the *gonorrhœa* both Simple and Venereal.

Externals are of use in this Case especially cold things applied to the Loins, as Purslain, *agnus casti*, Strawberry Leaves, a plate of Lead, *unguentum refrigerans Galeni*, *camphoratum*, *rosatum*, &c. *Crocus santalinum* spread upon Leather applied to the region of the Liver, is commended by *Tiaca* and others.

A
COMPLETE SYSTEM
OF
PHYSICK
Theorical and Practical.

BOOK IV.
Of Fevers.

CHAP. I.

Of Fevers in General.

§. I.

Almost all Mortal Men, in *Helmont's* Opinion, have been took away by the Cruelty of Fevers, Simple, or Complicate and Therefore I believe that not much out of the Way called Fevers, which at this destroy almost the third Part of Mankind, the most common natural Disease. *Hippocrates,*

lib. de Flatibus, confirms the same to be true in his Time: And also *Helmont* in *Tr. de Febris* num. 1. saying, *Altho a Fever be most familiar to us, yet it is it that chiefly fattens our Church-Yards, and lays Wast our Camps. Scarce any Man dies without a Fever,* cries the Poet, intimating, that it is the most General Distemper. And seeing, that besides Intermittent, Pettilential, and Spotted Fevers, others daily rage amongst us: for that Reason the credulous Ig-

norance of the Romans thought that a Fever was a Goddess, and erected Temples to its Honour; as *Valerius Maximus dict. factorumq; memorab. Cap. V.* does testify; perhaps lest it should hurt them and afflict the Body. Surely no Goddess, but a Fury of the Microcosm hath forced its way on every side through all Societies. This *Lernean Hydra* spares no Age, Country, or Sex, but is destructive and cruel to all. But Intermittents are more favourable, than those that burn with constant Fires. For it is not so grievous to be tormented and tortured at certain Times, or every other Day, as to be continually and always so. But of all these we shall treat in Order.

§. 2.

A Fever, both amongst the Latins and Greeks, seems to have took its Name from *Heat*. The Latins derive it from the Verb *Ferbo*, which is the same with *Ferveo*, to be hot. For it is a certain Heat or Effervescency, whereby the Body is in a Flame, or violently hot; although *Paracelsus, lib. 1. Param. c. 6. Tom. 1.* writes, That its Name is erroneously derived from *Heat*, for that it is a Sign of the Disease, not of the Matter or Cause. By the Greeks it is called πυρετός, από τῆς πυρός, that is, from Fire, or Vesuvian Flames. fiery Heat and Burning. *Willis* says that a Fever has its Derivation from the Word *februm*, or Off-scouring, which comes from the Verb *ferveo*; for he says, this Word befit its every sort of Fever, in that the Blood in this

Disease does ferment, and by Heat, like new Wort that is brewing, is purged from the Lees. So will have it to be derived from *ferbo*, *ferbis*, and by Transposition *febris*. Others by the Word *februm* (as may be seen in *Virg.*) understand a Purgament or Scouring. For those expiatory Sacrifices were offered for Purgation or Purification-Sake were called *febrae*, as *Ovid, l. 2. Fastorum*, *febrae*.

Februa Romani dicere patres.

From whence some Pretend to Physick do barbarously derive the Name of this Fever, *Sanguis purgum*, or Scouring of the Blood. The Arabs also gave it the Name of *Quar*, according to *Lucilius* the Poet.

Querquera consequitur capitisq; dolores.

It may also be called *Turbidus Sanguinis*, or a Troubled Blood, because the Essence and vital Cause of all Fevers, is in the disordered Mixture of the Blood. But I am unwilling to dwell so long upon Words, I prefer the Shell before the Nuts. For from these Etymologies Poets raise many Disputes and Contentions. Thus the Latins have derived a Fever from *Febris*. But the Germans, on the other Hand, call it a Shaking or Shivering.

For if a Fever does consist of Heat alone, then Shaking or Trembling, which we observe to be very frequent, cannot be called a Fever. For Cold and Heat are not the Cause, but rather the Effect of a Fever. *Helmont* has very well observed

he says, That Heat is only a
of the Fever, not the
itself. But seeing that Names
always declare the Nature of
thing, we will not therefore
any longer upon them.

Definition.

to the Definition of a Fever
General, the *Galens* define it
preternatural Heat of the whole
caused by the various Dis-
of the four Humours. Or,
is the same thing, they de-
by a hot and dry Intem-
Hence *Hippocrates*, to-
end of his Book *de Natu-*
ma, saies, That all Fevers
from Choler; and many
deduce them from Sul-
Others, who think
hit the Nail on the Head,
Fever by a preternatural

Galens and his Followers it is
A Fermentation or Ef-
fervescence risen in the Mass of
And in his Treatise of Fe-
ver from the Beginning, he
saies; "A Fever is a Fer-
mentation or immoderate Effer-
escence brought upon the Blood
Humours. So that accor-
to this excellent Author, it
is a notable Effervescency
of the Blood and Humours.
He explains the Nature of
Fever by the Accension of the
Humours; and saies, That it
is a Impurity of one Part of
the Humours, which therefore is af-
fected with Anger and Indignation
and such Motions.
Avicenna describes Fevers by a
preternatural Effervescency happen-
ing in the Duodenum amongst the

Juyces that meet together there,
which Effervescency he does not de-
ny to be afterwards augmented in
the Heart.

Barbette will have it to consist
in the encreased Circulation of the
Blood, and asserts, That it is a
certain Alteration in the Blood, and
especially in its quickned Motion.

There are also Others, who think
a Fever to consist in the Coagulation
and Stoppage of the Motion of
the Blood.

Paracelsus with his Crew of
Chymists say, That it consists in
the Burning of Sulphur and Nitre,
or that it is an Universal Inflammation
of the vital Balsam, and Mercury.
Whereupon some Chymists deny
that it's Essence does consist in a
hot Intemperature, as an Accident,
but rather in a certain Substance.

Others define it by an Ebullition
of the Blood and Humours.

There are also some, who pretend
that a Fever has its Original and
Rise from those Globules, which
were discovered in the Blood by
Mr. Lawenhæk.

Many seek for the Cause in a
vitious Acid coagulating the Blood,
and fixing it in the Heart.

Others blame the Ataxy of the
Animal Spirits, which in their O-
pinion, does occasion this Disease.

From what has been said it may
appear how intricate and doubtful
the true Cause and Essence of Fevers
hath hitherto been. Infomuch that
it is known to few in what Place
the febrile Matter does infallibly re-
side, and in what Acid or Humour
it doth precisely consist, as *Hel-*
mont in his Tract of Fevers, not
far from the Beginning, testifies:
A Fever is a Disease that is known
even from the very first Invasion:

but as to it's Causes, Manner of producing, Place of its Abode or Remedies, Physicians are altogether in the dark.

But now to act our own part in this difficult Business; ~~we~~ with the *Cartesians*, describe Fevers by a more or less disorder'd Mixtion of the Blood, with an Ataxy and Ex-candescence of the Animal Spirits, which according to the Diversity of incongruous Particles, that compose the Blood and circulating Humours, become of a various Nature and Disposition.

When therefore a certain Humor, endued with a fermentative Quality, quite contrary to the Motion and Mixtion of the Blood, is perpetually, from it's Store-House in which it is heaped up by little and little, carried to the Heart; or only before a total Apyrexia happens, and the former Portion of the febrile Matter not as yet altogether attenuated, nor subdued by the Blood, or thrust out of the Body, is carried to the bloody Mass with the other circulating Humors, and by irritating the little Fibres of the Heart, hastens the Disorder of the Animal Spirits; then it is that a *Continual Periodical* Fever is produced. But if the Blood upon some Occasion do ferment, and its Parts be so inordinately moved that it can scarce in many Days be reduced to its former orderly Motion, then by Reason of the confused Mixtion thereof, and the corrupt Tribe (as the Vulgar express it) of grievous Symptoms depending thereon, we say the Patient has got a *Continual* Fever. And in this consists the Essential Difference betwixt *Continual* and *Intermittent* ones. That you may the better

imprint these Things in your Memory you may take notice, That Blood does so long retain a due exact Mixtion, as those indivisible Parts that constitute it (perhaps as Wine is compounded of) mutually touch one another, the subtle Matter that fills the little Spaces can maintain the Agitation of these Parts, and as is agreeable to our Nature, foreign æthereal Matter flowing in, the Union is destroyed, and the Parts all more or less as it were relaxed and other Interstices and Pores are formed amongst the Parts. And from hence proceed many Fevers and inordinations and Fermentations of Humors, and especially of the Blood. For by the active Corruptive Salt, Sulphur, and Spirit, the *Phænomena* of Fevers can be explained, because nothing is moved of it self, but has its Motion from something else. Those who affirm that the Motion of the Particles that constitute the Blood is from a most subtle æthereal Matter, which fills even the least Pores, and all the intelligible Pores, exagitates the various Particles into various Motions. Furthermore the Blood has this in common with Wine, that at some Times in a Year it is more exagitated than others.

From what has been said it may easily be concluded, That the essence and formal Cause of all Fevers does consist in the confused Motion of the Blood, and the Perturbation of the Animal Spirits proceeding. Yet every Fever which is mixt with the Blood, does not forthwith cause a Fever, but only that which is of a fermentative

ture, that is, which disturbs the Motion of the Blood; of which we shall speak hereafter when we shall speak of the Cause.

§. 3.

THE Ancients affirm That there are divers Sorts of Fevers, some in the *Spirits*, some in the *Blood*, and lastly, some in the *Parts*.

The first they call *Ephemera's* Fevers, that is, Fevers that last but one Day: to the second they give the Name of *Putrid*, and the third they call *Hebent*, to which also they add the *malignant Fevers*, and other Diseases of the whole Body, as they call them.

Sylvius not content with this Number, hath found out some more, to which he gives divers Names, as, when it is accompanied with Vomiting, he calls it a *Vomitory* Fever; when it is occasion'd by going to Stool, he calls it a *Stoolary* one, &c. but Entities must be multiplied without necessity: for it is sufficient that the Symptoms be observed, after which it is altogether unprofitable to make divers *Species* of Fevers, since they all differ only gradually. They are therefore either *Intermittent* or *Continual*.

There are many and other Differences, which are, as it were, subordinated, as from the Time of the Intermission they are either *Vernal* or *Summeral*, some are *Quotidian*, some *Tertian*, some *Quartan*, &c. some are *Benign*, others *Malign*. According to the Diversity of the Nature of those acid febrile humors which variously disturb

the Mixture of the Blood, divers Sorts of Fevers are produced.

How *Putrid* Fevers differ from *non-Putrid*, Authors have not explained. It is true indeed that they say that in the *Putrid* there is an unequal Pulse; but this is only because the Drops of Blood that enter the Heart, are not all alike badly mixt: which however makes nothing to the real difference of Fevers.

In Our Opinion Fevers only differ in Degrees, as the Blood is more or less disturbed; and hence the Cure it self differs according to the Degrees of efficacious Medicaments. They differ also as to the Proximate and Remote Cause; for some have their Rise from the corrupt and acid Chyle disordering the Blood; others immediately from the Air, &c. Again they differ as to their Symptoms, the Cure of which is to be attempted as Necessity urges. The sweetness which we have often observed in the Mouths of Febricitants, is an Argument that the Blood is not vitiated with any Thing that is acid or bitter. Wherefore it is none of the worst Signs.

§. 4. Part affected.

IT is a great controversy and very dubious what the Subject of a Fever is, whilst some, especially the Ancients, make the Branches of the *Vena Porta* to be the Fountain of it; others the greater and more principal Veins and Arteries of the Liver; some the greatest Vessels of the Blood, and those that are next the Heart; many others, both of the *Ancients* and *Moderns*, make that noble *Viscus* the Heart, as to it Humors, Spi-

rits and solid Parts, to be the only and true Subject of it; which they prove from this, Because the Action of the Heart, to wit, the Pulse, is hurt, which many in this Distemper reckon the only Sign of a Fever. *Sylvius* accuses the *Duodenum*. Others, especially *Helmont*, blame the upper Orifice of the Stomach. Most Physicians make the less Principal Subject of Fevers to be the Mass of Blood, or rather, the whole Body; for such Heat as is produced by the Heart, such is received by the other Parts, which, like Subjects, undergo the same Fortune with their King. But the first Passages, as the Ventricle, Mesentery, *Pancreas*, and other Glandules, also the *Viscera* appointed to elaborate and perfect the Chyle, many of which, having their Tone relaxed, beget nothing but acid Crudities, are said to be the Subject of the Cause.

We in short, make the Subject of a Fever to be all the Parts and *Viscera*, wheresoever there are any small Pipes, and also the nervous or fibrous Thread which is obvious every where in the Body. Neither do we exempt the Head; nor the Sanguiferous and Lymphatick Vessels; nor the Chyliferous, in which often those acid and feculent Particles are wont to lurk; no, nor so much as even the cutaneous Glandules, because that savage and febrile Acid is also sometimes wont to lodge in these. That the *Serum* is often the Receptacle of this Acid, I was convinced by experience in my Eldest Son, who when he was five years of Age, having took a Dose of *Mercurius dulcis* for the Worms, was presently seized with a very great Salivation; which, af-

ter that I had given him Opiats, especially *Theriaca Celestis*, immediately ceased, but he fell a tertian Ague; then after *Ursi* fals, giving him Anti-Febrile Fever withdrew, but the Sal on returned; a Month after I gave him Opiats again, and he fell a second Time into a Fever; laying aside Opiats, I made use of Purgers and Dryers, a Decoction of the Woods with their Essence, so, God be praised, he was restored to his former Health. The *Lympha* retained in the becomes acid, which after being communicated to the of Blood disorders it and makes ferment.

§. 5. Diagnostick.

WE will here in Words, give the Signs of a Fever in General, relating those, which discover a Fever Special, or this, or that particular Fever, to another Place. Whatever Authors say of Cold Shaking, they have left us Marks whereby to know what *Species* a Fever is of, before it hath made its period or Circulation Intention and Remission.

A Preternatural frequent Pulse is accounted a Pathognomonic inseparable Sign of a Fever; I have observed the same also in other Diseases when there was Fever. as in Faintings, Convulsions, Epilepsy, Jaundice, &c. and the Pulse is always swift in Intention. After these the Physicians bring great Weariness, Stretching, Yawning, Cold and Heat, Pain of Head and Loins, Vomiting, Loss of Appetite, all which Signs

notwithstanding be observed
the Beginning of other Diseases,
when the Animal Spirits
do not irradiate the Parts as they
ought; for from hence follow
the above named Symptoms. But
a Physician hath observed the
beginning of a Fever accompanied
with the foresaid Symptoms, he
can certainly know what particular
Cause it is of; Therefore he will
well to attend diligently to
the Things, lest he undergo the
Consequences of the Vulgar. Altho
the conjunct Signs do, for the
Part, one way or other shew,
there is a Fever; yet they do
discover of what Particular Sort
it is. For the Heat in Fevers some-
times is excessive, in some 'tis mild
as the tremulous Motion
of the little Fibres is more or less
excited by the fluid Particles.
There is often a vehement Pain of
the Head by reason of the great
Quantity of the Blood, and the
Presence of rigid Particles, and
a great Fermentation. Altho
there is a great and frequent
Pulse, because of the augmented
Fermentation, and violent Influx
of the Animal Spirits into the

exist in the Blood (in which, ac-
cording to *Hippocrates*, there are a
Thousand) which they say do pu-
trefie in the larger Vessels, and
that *Phlegm* putrefies every Day,
yellow Choler every third Day in-
clusively, and *black Choler* every
fourth Day. So likewise from
these Humors they derive all putrid
Fevers; for by the putrefying of
these Humors, and the Vapors that
exhale from them, they explain
the Heat and Cold, yea all the
Symptoms of Fevers. Thus the
Humor putrefying in these Vessels,
enflames the natural Heat of the
Heart and turns it into a preterna-
tural or fiery one; whether it be
from something within the Body,
as Obstructions, Putrefactions, Hu-
mors and hot Vapors sent to the
Heart or something without the
Body, as Heat, of the Air, Sun, &c.
And thus do they define a Fever
in General by a hot and dry In-
temperature.

§. 7.

THE Chymical Paracelsists
do contend that Fevers do
not arise so much from the Hu-
mors, as nitro sulphureous Impu-
rities; affirming that the Humors
cannot be enflamed of themselves,
but that whatever is enflamed is of
the Nature of Sulphur. For *Paracelsus*
himself doth attest, That
the peccant Matter in Fevers is Sul-
phur and Salt-Petre. But in ano-
ther Place, he says, That a Fever
arises from the Obstructions of
the Spirit of Life, and that the
Cause of all Fevers is an Oppilation,
which turns to Putrefaction.
Therefore the followers of *Paracel-
sus* do explain the Causes of Fevers

§. 6. Cause.

ALL Physicians agree that a
Fever has its proper Cause,
because most of them (with-
out Envy be it spoken) are confu-
sed and obscure in the Business, it
manifest that it still lies buried in
darkness.
The Ancients, especially they
were Defenders of the *Galenical*
Putrefaction, explain these Fevers
by the four Humors supposed to

(according to his Principles) by Sulphur, Mercury and Salt conglomerated here and there in the *Viscera*. Others elegantly deduce the Generation of them from vitriolated acid Salts, if they ferment with lixivious Salts and Sulphur: Like as when Oyl of Vitriol is mixed with Oyl of Turpentine, and when Nitre is mixt with Vitriol for the making of *Aqua fortis*, or when Water is poured upon quick Lime, or when *Aqua fortis* is poured upon Silver.

§. 8.

Helmont ascribes the whole Work to the ferment of the Stomach corrupted and strayed out of its Precincts, and thereby irritating the *Archeus*; and saith, That the Matter does not fluctuate in the Blood, but sticks inwardly to the Vessels, and that the *Archeus* alone is the Cause of every Fever. For he saith, That the febrile *Blas* doth first raise a Coldness, and after that a Heat in the *Archeus*: for according to him, the *Archeus* will stir up febrile Shiverings, Colds and Heats, but not the peccant Matter. And for this Reason, as he says, *Tract. de Feb. c. 5. n. 4.* when a Bone is out of joint, forthwith the Patients Teeth chatter, and he is troubled with a Shivering. N. 14. he says, That the Gall does regularly change the Chyle of the Stomach from acid to salt, but that in Fevers it changes it preposterously into bitter. Also *cap. 10. n. 1.* he asserts, That Continual and Intermittent Fevers have one and the same Seat; and that the Difference does not rise from their changing

their Places, or from the Nature of their Lodgings, but only from the Account of the Occasion of the Matter. Likewise also *Cap. n. 8.* he says, The occasional Cause of Fevers, and the Matter in the last Digestion of the Aliment, whilst that the solid Parts do assimilate the Nutrients themselves out of the Blood happens very often that there are Alterations, and, as it were, posteros Abortions. Therefore this degenerating Aliment, producing various incongruous Shapes, also beget divers Fevers. Another occasional Cause of Fevers, according to him, is a Retention of or liquid Ordure, drawn by Meseraic Veins out of the Enteries of the larger Intestines. Recrement be carried obliquely to another Place (which ought naturally to pass by Urin) it causes a continual Fever. But when an Aliment degenerates in the last stage of the last Digestion, the most Part it is milder and more fluid, and therefore causes Intermittent Fevers, which continue the longer depending as the Matter of them is more glutinous: But the more violent is the fiercer, and therefore doth raise the more grievous Continual Fevers, and which come sooner to a Period. Or these Fevers, or the two occasional Causes when they conjoin together, do bring forth Epistemic, semi-tertians, Battard-Tertian, legitimate and errack Fevers. Therefore the Intermittent Fevers are stronger Incisers than the Continual do, because they have a more oblique and more glutinous Matter which grows inwardly to the Vessels. But if that

degenerate above the Liver, raises various Apostems, but not primary Fevers; and because in an Inflammation the *Cruor*, the Aliment of the solid Parts degenerates into *Pus*, it also necessarily brings a Fever. And after it comes to the Height the Trouble and Pain is the less, as in Contingent Fevers, and then either a *Crisis* or Abscess is at Hand.

Therefore *Helmont*, as we have already said, asserts, That Fevers arise from a peccant Matter, which being once existent in the Body, the rest of the Members or *Archeus* do enflame it self by its own Excandescence, and being too much heated, is extremely troublesome. He does not say that there is any Heat in the peccant Matter, because if there were, it would be more violently near at Hand than at a Distance; Nay, that a dead Carcass, in which does remain a putrid Matter that grows hot by putrefying, would be hot. It is therefore only occasionally heated, after the Manner of a Thorn, which occasionally causes a Heat and Tumor: Not because the Thorn heats, but in that the Spirit of the Members, that is, the *Archeus*, doth enflame it self, in striving to expel the occasional Matter, as if it were a Thorn. Whosoever takes this away, whether by hot Things or cold, he wholly roots out the disease, and thereby the rage of this Spirit is appeased.

Therefore a Fever, according to this Author, is, not barely the Violence of Heat, but the occasional Matter, at the Appulse of which, the *Archeus*, as if it were enraged, enflames it self. He says, That the Thorn has its Seat in the first Shops,

from the *Pylorus* through the *Duodenum*, and the manifold Vessels that are there, the Intestines and Veins of the Mesentery, the Spleen even to the Liver; But that the nearer to the Mouth of the Stomach these Annoyances are, they are the more troublesome, and that afterwards more grievous Accidents, as Thirst, Want of Appetite, Head-Ach, *Carus*, Watchings, Anxieties do ensue. Furthermore *Helmont* says, That a Fever is not only an expulsive or alterative Endeavour, but that it is a Part it self of the *Archeus* enraged at the Presence of the hated Enemy, which is the occasional Cause. Hence it is manifest that the Essence of all Fevers does consist in the Excandescence of the *Archeus*, and only differs as to the occasional Cause. In like manner the *Helmontians* say, That a Fever may also arise without an occasional Cause, as when the *Archeus* does grow turbulent on its own accord, and upon some small Error inwardly assumes to it self *Species* of Madness, and by this Means is disturbed, and sequestered from the remaining Part of the *Archeus*. They further add, That this however is for the most Part provoked by the occasional Cause, which is like a Thorn; by means of which the *Archeus* is moved by its own *Blas*, which it hath from the Soul; and this *Blas* sometimes is so elevated, that the *Archeus* seems to take Fire. Now, according to our Author, these Thorns are nothing else than corrosive sharp Salts, proceeding from Indigestions, by the Ministry of which the *Archeus* is easily enflamed, and it is caused as often as the Blood by volatilizing is not ventilated. Or also

also the occasional Cause doth arise from hence in that the Chyle by the Fault of the Stomach, is become acid, and being carried into the Veins of the Mesentery through the Error of the Duumvrate, does cause a Fever.

Now the Reason, as *Helmont* will have it, why there is a quick preternatural Pulse in Fevers, is not through any Necessity of cooling, or to expel the fuliginous Vapours, but because of a most swift Dissipation of Spirits; for by a more speedy Pulse the Restauration of the Spirits is hastened. What *Helmont* says of the Causes of the other Symptoms of Fevers, we will show afterwards when we treat designedly of their Symptoms.

§. 9.

THE famous *Willis* (which Opinion *Boerhaave* also, and *Kerger* are of) treads another Path, and saith, That a Fever doth consist in a notable Effervescency of the Blood and Humors. For he affirms, that the Blood in a Fever doth mightily and with great Violence boil: because every Febricitant (be he never so ignorant) complains of the Blood being affected, and of its fermentating in the Vessels, and as it were, running mad. Furthermore, he presupposes the Juice that irrigates the nervous parts and the Brain, to be transmitted out of the Blood into the Nervous Stock by an even motion and a certain Circulation, and from thence again to be refunded into the Blood: which Juice if it receive any Taint from the Blood, or is perverted in its Motion, is the Authour of Pains, Shakings, Convulsions, *Deliriums*,

Phrenzy, and of many Symptoms of the Nervous Kind: His opinion is that the Nutritious Juice Chyme, is supplied out of daily Food, is mixed with the Blood, becomes a perfect Humor, and in it, whilst it circulates, assimilates into it self; at length, waxing is separated and set aside to Nourishment of the Parts. As long as these Mutations are rightly perform'd, he thinks that the Blood ferments as it ought to do: but if this Juice be not duely matured by the Blood nor assimilated, but confused and remains in the Blood like some heterogeneous Thing, that then a febrile Ebullition happens, yet not always, but only when the Blood is fully saturated. Now, he says, That this Juice is corrupted by its own Fault, or the *Viscera*, but by the Fault of the Blood; for that the Blood when rightly disposed does sanguine, but if it do degenerate from its natural and genuine Disposition into a sharp or austere one; that then also the Stock of the Nutritious Juice is perverted.

He does not compound the Blood of the four Humors of the *Dogmatists*, viz. the Blood truly is called, *Phlegm*, and he calls the *Cholers*; but of the five Principles of the Chymists, *Spirit, Salt, Sulphur, Water* and *Earth*. But he thinks that *Phlegm* and both the *Cholers*, being Recrements of the Blood, are shut up in the proper Receptacles, or in the narrow Passages of the *Viscera*, and are not mixed with the Blood, and therefore cannot be the Cause of a Fever.

He also makes a two fold Fermentation in the Mals of Blood

Natural, the other *Morbous*.
drives the *natural* from a dou-
ble Cause, from the *Crafsis* of the
Blood itself, which consists in a due
Proportion of Sulphur, Salt, and
Phlogiston, and from *Hogelandus's* Fer-
ment, or *Cartes's* Fire hid in the
Cavities of the Heart, which in a Mo-
ment kindles the Blood that flows
thither. The *morbous* he places
in the Disproportion of one or more
of the Principles.

From the *morbous* fermentation
arise, That Fevers have their Births,
according to the three-fold
Manner, or Way of Fermentation
of the Blood, he makes a threefold
Distinction of continual Fevers. For
either the Spirit alone, or also
the sulphureous and oily Substance
ferment, or that the Blood is
infected with a poisonous Miasm.
From the first he derives an *Ephemeral*
Fever of one or more Days, or a
Quintan; from the second *putrid*
Fevers; from the last, the *Pestilential*,
Malignant Fevers, *small*
Pox, and *Meazles*.

The Author furthermore makes
the natural Temperature to be ex-
ceeded by a third preternatural
Degree of Effervescency, wherein the
Blood undergoes an alteration
which never happens to Wine,
but very often to Milk; to wit,
sometimes this liquor is coagulated
by the morbid Cause, so that its
Substance is scattered and falls to
the bottom, and the thick and terrestrial
Part is separated from the thin: by
Means of which the Blood does not
circulate in the Vessels, but
is frozen Portions of it being
left to stagnate in the extreme
Parts of the Heart, do interrupt
the regularity hinder the equal and e-
asy Motion to restore which greater

Effervescencies than usual are rai-
sed in the Blood; such as are wont
to be in a Pleurisy, malignant Fe-
vers, &c.

§. 10.

Splivius, from the various Causes
of a preternatural quick Pulse
acting variously, searches out va-
rious *Species* and Differences of
Fevers: the Cause of which he
makes the too great and permanent
Rarefaction of the Blood; arising
from a strong Fire, breaking forth
by the Effervescency of both sorts of
Blood.

He therefore blames every Thing
that's sharp, sometimes an Acid,
sometimes a lixivio-saline, some-
times a briny-saline driven through
the Veins with the Blood to the
Heart, and inwardly twitching its
Parenchyma. Also every dry Fla-
tulency, carried in like Manner
with the Blood to the Heart, or
raised by the Effervescency of the
Blood in the Heart, and increasing
the Dilatation of it's Ventricles.
Also every thing that's sharp or
hard in the *Pericardium* or else-
where, and inwardly gnaws or
pricks the Heart.

And to the causing of Fevers he
thinks the *Succus Pancreaticus*
does very much contribute, whilst
some Part of it stagnates in one or
more of the obstructed lateral
Ductus's, and is made sharper by
its long lying there; for by that
acid Acrimony it forces it's Way
through the more or less viscid
Pituita, and whatever occasions
that Obstruction; and being pou-
red into the *tenue Intestinum*, and
there mixing with *Choler* and
Phlegm makes a vitious Fermenta-
tion.

tion. So that *Sylvius*, to be brief, will have the Cause to be, the *Succus Pancreaticus*, made somewhat sharper by reason of the Passages, that are stopped and a vicious Fermentation thence ensuing; which Acid, together with a predominant lixivial Salt conveyed to the Heart through the *Vena La-ctea*, he concludes to be the Cause of a preternatural Heat there.

A Physician of good Quality bears up against the Opinion which this Practitioner entertains of the Pulse, saying that the Quickness of it is no true sign of a Fever. (1) Because it is Notorious that the Pulse is very quick in the Cold Fit as well as in the Hot, and yet not one of the *Sylvians* will affirm that the Circulation is augmented in a Cold Fit. (2) And that we may more accurately understand this, let us consider what a Pulse is, and how it is made: A Pulse according to him is nothing else but a very quick or Convulsive Motion of the Heart & Arteries. Now the Heart is a Muscle, or rather made up of many Muscles which open and shut dilate and contract it. And he proves that the Opening or Constriction of the Heart, comes from the Influx or Afflux of the Blood, because so often as the Heart is contracted and freed from Blood, so often does it beat; for the Blood does not move the Heart, but the Heart receives and sends it out again, or rather discharges it self, just as Water is pumped out of a Pump. So that he reckons that a quick or slow Pulse comes from nothing else but the quicker or slower Motion of the Arteries, (which Arteries are so many Pipes and Channels that receive and drive

on the Blood, not by Means of the Blood it self, but the Muscles, after the same Way (the Heart does) From whence he concludes, that the Heart and Arteries may be quickly dilated and contracted, tho the Blood be thin, hot, and in a very quick Motion; nay, tho it be gross, cold, in a brisk Motion; for seeing the Heart can beat without Blood, may also beat if the same Blood be thick. For the Pulsation of the Heart does not properly depend upon the Blood: nay, it is as he sayes, to any considerable Person, that the Blood will be thicker and slower mov'd, in Cause of a quicker Pulse: The Reason is this, Blood which is gross and moves slowly, passes with great difficulty through the smallest Arteries into the Veins, so that the Heart, that it may discharge it self of the Blood, beating, as it were, in the Arteries must beat very quick, that what cannot by one, may be effected by frequent Pulsations. He declares the Passage to be paradoxical, that is, That a quick Pulse in Fevers is not a Sign of Augmentation of the Circulation and Effervescency of the Blood. The same Author likewise says That the Opinions of *Sylvius* and *de Graaf* about the Pulse are invalid. For whereas *Sylvius* attributes the Cause to a thin, piercing, Volatil Salt; the said Author proves by these following Reasons, that it does not consist in any such Thing. (1) Because those Remedies which are prescribed in the Plague, for the most part consist of volatile Salt, as volatile Salt of Harts-horn, Vipers,

Because there is a great Resistance betwixt that and those Acids which arise from an Acid. And also because Oil of Vitriol, and all Acids immediately infused into the Blood of any Creature cause the same Symptoms.

§. II.

OUR own Opinion is, That the Nature of a Fever consists in, nay has it's Original from, heterogeneous Particles mixt with the wholesome Mass of Blood, which have no proportion with it in Figure or Motion. That is to say, that it is composed of round Pores, and indeed round Particles, which leave interstices that are pervaded by a subtil Matter, which has no Commerce with that which runs through the good Mass of Blood. So that when an incongruous thing is intimately mixt with the Blood, then there ensues an unusual Fermentation or Ferrescence thereof, and thereby the Animal Spirits are disturbed and affected, whence proceeds their Affection or total disorders, and from thence several preternatural Symptoms, a very quick Pulse, a Delirium, phrenetic Convulsion, vertigo, often occurring in Fevers, may be derived. So that as often as Exotick Particles of the Blood, such as the Pointed, and those that have many Angles; as often, they, and so long as these Particles predominate, and consequently cause a confused Motion; so often and so long the Fever rages in the Blood, and seizing upon the Heart and Brain does sometimes cause their Ruin and Devastation there. So that the Blood is so long kept

in an exact Mixture, as those indefinite Parts that compound it do mutually touch one another so close, as that the subtle Matter, filling up all the Intervals, is able to keep those Parts in their due Motion: But this Tie is dissolved whenever other spaces and unusual Pores are made amongst the fluid Parts, and from hence; in our Opinion, daily do proceed so many Fevers and inordinate Motions & Fermentations of the Humors. So that we do suppose the Essence and formal Reason of all Fevers to consist in the disturbed Mixtion of the Blood, and which proceeds from that, the disorder of the Spirits; tho every thing that is mixed with the Blood, cannot presently produce a Fever, but only that which is of a fermentative Quality; for thereby the Mixtion of the Blood is hindred, and consequently the Animal Spirits disordered; such as are Salts, Recrements, and disproportionate Particles; likewise disagreeable Sulphurs, the *Lympha*, or Chyle corrupted with an Acidity, and such like, and that which we call a febrile Ferment, which may easily be communicated to the Heart by the Lymphatick Vessels from all the Parts and *Viscera* of the Body, and in its most inward Recesses disturb the Mixtion of the Blood; as may be proved by Wounds, *Buboes*, and Ulcers. Yet we are of Opinion that a Fever proceeds commonly from the Non-naturals, as they call them; from the Air infected with disagreeable Corpuscles; from irregular Eating and Drinking, which supplies the Blood with nothing but vitious Chyle; by the Intermision of some usual Evacuation;

vacuation; or the Passions of the Mind.

But some Difficulties arise touching this Opinion, as (1) Whether certain Particles of the Blood are blended amongst one another in some certain Order, which upon the coming of the Fever are changed and confounded? (2) What the Effect of this confused, disorderly Mixture is, and in what Order those Particles are disposed in time of Health? (3) What it is that thus disorders the Mixture? (4) How the Blood thus troubled can cause a Fever? And (5) How from this *Hypothesis* an Account can be given of the *Phænomena*, and Symptoms of Fevers? So that we are to shew first the certain Order of the Mixtion of the Particles in the Blood; then How they are disturbed; and lastly How a Fever comes from this Disturbance. We must therefore observe, that the Order and Harmony of the Particles in the Blood, consists in their due Motion, Figure, Magnitude and Situation; for they are in no Confusion, but have a proportionate Mixture whilst in a Natural State; which is disordered by a supervening Miasm, or a febrile Ferment: And this does not Consist in the sensible Particles, as may happen in any Indisposition and Caco-chymy, but in the insensible. Now the Effect of this Mixtion is this; That the proportionate Fermentative and Vital Motion of the Blood may be preserved, and all the vital Actions commodiously performed. The natural Order of the Particles is such, that there is no Appearance of any that are either Acid, saline, bitter, watry, or viscous, &c. which *Hippocrates* long since

taught; but all of them ought to be so tempered together, as to consist in one and the same Motion.

Now that disturbs the Motion of the Blood which brings in another ætherial Matter that produces the Author of another Motion that is, the Pores of the Ferment do not in every Respect admit the Pores of the Particles that constitute the Blood, so that there rises a Confused Mixtion in the Heart, where it ought to be more exact; and in this consists the essential Cause of a Fever, and in the Blood troubled or disturbed. It is therefore clearer than the Sun at Noon day, that all the Symptoms of Fevers, allowing this to be the formal Cause of them, may be very easily explained, as we daily in the Modern Schools do, all which we will be more particular when we come to treat of Fevers particular.

§. 12. Prognostick.

THE greater or less Disorder of the Blood is, more or less dangerous is the Fever. Those who are fat are not so apt to have Fevers as those that are lean.

Muddy Urine without any Sediment, is a great Sign of the Disorder and Confusion of the Humours; the sooner that it abates of its Cloudiness, and the Sediment being of a good Consistency, settles of its own Accord; by so much the shorter will the Fever be, and is a Sign of a good *Crisis*; for the redder and thinner it is, so much the Worse.

A weak Pulse prefigures a doubtful Event; an Intermitting one, except

at the same time very weak,
not always mortal.

A good Pulse, that is, a great
equal one, though accompa-
nied with bad and grievous Symp-
toms, is Better and Safer than a
Pulse with those that are mild-
for this often proves Mortal.

Autumnal Fevers are more
dangerous, and attended with worse
Symptoms than the Vernal, the
Patient in Autumn being deprived
of Spirits.

13. Dietetic Cure.

During the whole Business of
Physick is to conquer the Dis-
ease, and cure the Patient as far
as possible, and as *Hippocrates*
not only to keep him in
Health, when he is well, but also
to keep him up, when he is like to
fall, and when he is fallen to rear
him up again. It is of great Mo-
ment to learn the General Curative
Methods of Fevers, according to
the Constitution of the Etymology,
the Situation, Subject, Differences,
the Causes, which we have
before, but slightly mentioned.

And first, that we may be Me-
thodical concerning Diet in Fevers
Hippocrates writes well *l. 1. Aphor.*

That not only the Physician,
the By-standers, and the Pa-
tient himself must bear a part, or
no Remedies can be admini-
stered, if either the Attendants, when
the Physician has prescribed a good
Diet, omit to give it, or give
it unseasonably, or do some-
thing about him without the Phy-
sician's Advice, which may after-
wards prove hurtful to him; for
the Scurvy Women which sit by,
and wait on the Patient, both Kin-

dred and Friends that come a visit-
ing, are wont to force much meat
upon him to his utter Ruin, and
this too; as the tatling Fools
pretend, to keep up his Strength.

Now the main Business of the
six Non-naturals regards the Pa-
tient's strength, his Cure only by
Accident. Therefore first of all
the Air is to be considered, from
which a Fever generally has its Ori-
ginal, especially if it be infected
with exotick Corpuscles. Let that
which is pure, serene, and temperate,
be chosen; if that which is naturally
so cannot be had, it must then
be made such by Art. That which
is too hot, is to be avoided, and also
that which is too cold, because it
shuts up the Pores: So long has
this opening and shutting of the
intercutaneous Passages been ob-
served by Physicians, that *Ga-
len* in his time did not reckon it to
be the least Cause of Fevers.

As to Meat in this Case it con-
sists in Quantity, Quality, and
the Way of taking it.

And first for the Quantity, We
must consider that those, who are
apt to have Fevers, have always
some hidden Morbific Causes with-
in them, which easily hasten a con-
fused Mixtion of the Blood; There-
fore the feverish Matter is only
augmented by much eating, nay,
the Chyle becomes more viscid,
gross and acid, which if it gets in-
to the Mass of Blood, an intermit-
ting Fever must necessarily follow;
so true is that Saying of *Hippocra-
tes*, 2. Aphor. 10. *The more you
feed impure Bodies, the more hurt
you do them.*

Therefore they who humor Fe-
verish Persons in this Point, do
not at all consult the Patient's good;
nay,

may, run him into a manifest Mischief; for the Stomach of Febricittants, by reason of the Stupidity of the Faculty in the *Viscera*, and the nervous little Fibres kept in continual Motion, and made more lank by much Drinking, is very faint, and the Chylification, through much Eating, is rather hurt and its Fermentation spoiled, and by that means breeds Fuel for the Fever. And for this reason *Hippocrates*, 7. *Aph.* 65. says, The meat which is given to one in a Fever; as when he is well it is a Strengthening to him, so here it is an Increase to his Disease. So that in the most acute Fevers which have commonly their *Crises* the first four Daies, they must use a very slender Diet. In acute Fevers such a slender Diet is not altogether required: And here ought to be considered, the Climate, Season of the Year, Age, the Diversity of the Fever; as to which this or that thing is, or is not Expedient, according to *Aphor.* 11. §. 4.

As to the *Quality* of the Meat, *Hippocrates* advises the Patient to Soups rather than solid Meats. For such Diet is more agreeable to Nature, which is sooner refreshed by these, and not taken off from the War, which it has undertaken against the Disease. And it is easier, sayes *Hippocrates*, *Aphor.* 9. §. 2. to be refreshed with Drink than Meat.

As to the *Manner of taking* Meats, we are here to know that the Patient must not eat at all in the Accessions of Fevers, in which thing there is a great Errour in this Age, as we have already said, when most Physicians allow their Patients Meat without observing

Difference of Time. For Nature whilst in the Accession it is fighting against the Disease, is not content upon providing of Aliment. So that the Meat not being fermented, aggravates the Fever and its Symptoms. And *Hippocrates* 1. *de Acutis*, also tells us what Inconveniencies happen upon the unreasonable giving of Meat. There are some Cholerick, Hot, Sanguineous Bodies of a most exquisite Sense, who, being used to great Toil, and to feed heartily, if they do not eat in the Beginning of a Fit, fall into a *Syncope*, *Melancholia*, &c. which *Galen* tells us 10. *Meth.* Cap. 3. speaking of a Youth, who, having a Tertian Ague in the Summer time, did not eat when the Fit was coming, fainted away. But one Symply does not make a Spring, however I think we should do something to Custom. But many politick Physicians think they have no more to do, than to please the People and seem to be careful of the Patient's Strength, whose preservation I would have them know, does not depend on Words, but a proper Administration of Remedies. But the World loves to be impos'd upon in the like manner, as I do not like severe Physicians, so those are worse that are too favourable. Conscience sake, as *Aesculapius* at Rome; who allowed his Patients Baths, Wine, Flesh, and whatever they longed for, or was grateful to them; by that means continually Winning the Hearts of the Romans, no doubt, not without the manifest Injury and Death of many. But enough of this.

to Rest and Exercise. Immoderate Motion is oftentimes ill, and may cause a Fever; by that Means the febrile Particles that lie lurking in the little Passages are mightily forced, which communicated to the Mass of Blood, are apt to disturb and produce a Fever. And likewise too much rest is ill, because it means the Particles through great rest and Vacation contract a Malignancy, which afterwards through their superabundance well and disorder the Blood; where the Golden Mean is the

same Measures are to be taken in Sleeping and Waking. The Mind ought to be free from all Fear, Sorrow, Anger, and Grief; for by these you may quickly hasten a premature Death it self.

The Care that Evacuations and Medications be according to

by Venesection, Purging, Clysters, according to that of Monsieur Mollier the French man,

Clysterium donare, postea Purgare, venum secare, &c.

For they endeavour to carry off the Putrid Humors, which breed that preternatural Heat in Fevers. Their other prescriptions are either things Cold or Moist, as several Alterers, yea and they prescribe variously, according to the different Symptoms. Others of them, as Avicen, after they have opened a Vein in Fevers, are of Opinion, that the Belly ought to be loosned with Manna. Others order first a Purge, and then to breathe a Vein: For this is their main Drift in Curing, to root out the Mine of the Disease, which they say is in the Humors, and so clearly to extirpate the Febrile Matter out of the Body, that there be no Remainder of it left, or any fear of a Relapse; for which Reason they ply the Patient with Catharticks, Vomitories, and also Venesection, for that is Galen's Opinion, 9. *Meth. c. 5. de Sang. Miss.* 20. If a Crudity, either of Meats in the Stomach, or Excrements in the Intestines did precede, that Bleeding should be deferr'd so long as shall be thought sufficient for the Concoction of the Meat and Descent of the Excrements. Therefore several of the Ancients before they breathe a Vein, if they think the Stomach and Intestines be stuffed with Excrements, do usually, according to Galen's Advice, defer the Remedy for a short Time, and in the mean while Exonerate the Body with some Lenitive Medi-

B b b

cines;

§. 14. Cure.

WE come now to the Cure, and first according to the Opinion of the Ancients: must observe in general, that nothing which is Preternatural indicate a Removal thereof, as Galen teaches, l. 8. *Meth. Med.* So that if a Fever, according to the Dogmatists, is bred of Heat and Dryness, we must in the Cure have recourse in the first place to Cooling and Moistening Things; which Reason Galen, lib. 9. *Med. c. 14.* says, every such, is Cured by Moistening and Cooling Remedies; which Avicenna confirms, lib. 1. *Aph.* And they usually cure Fevers

cines; provided the Disease will admit of so long delay, and that there be no danger in such an Omission. But if it prove otherwise, and the Disease be so violent, that it will not admit of Delay, then having first given a Clyster, they presently fall to Venesection, after that, if there be occasion, they forthwith give loosning Medicaments. *Avisen*, after Venesection, as we said before, advises the Belly to be moved with such things as these, Barly-water, and a little *Manna*; who on this occasion prescribes three Medicines; the first is made of Barly-water or Ptisan, which, according to *Galen*, 1. *de Rat. Vict.* 18. does gently loosen; and *Manna* which also was not unknown to *Galen*, and which, 3. *de Alim. Facul. Cap. de Melle.* he calls Aereal Honey. The other Remedies for Fevers prescribed by the Galenists, are Distill'd Waters, Cordials, altering Broths, with Cream of Tartar, which dissolve the *Mucus* in the Stomach. Their other Remedies in this Distemper we shall particularly speak to afterwards.

§. 15.

PAracelsus, who, contrary to the opinion of the Galenists, is against Blood-letting, says, Take this brief Account of Fevers; First of all, let there be a Febrile Purgation, then a Specifick Cure, and a Causal Diminution, so as that a Mercurial Vomit precede the second Medicament. For by this Purgation all the Fever is expelled in the Peccant Matter; besides, if the Disease be not prolonged, neither Cure nor Diminution is necessary. For a Mercurial Vomit ma-

ny times works a perfect Cure. But if it be spread into the Members, his *Laudanum* presently follows, which expells the Fever, also the Dilatation. But an Election, whether by the *Salvatoria Cephalica*, or that which is done by the Spine of the Back moves the Peccant Matter in Blood, and that between the and the Skin. So that in this there are three things which do the same thing in a Cure, all of perfect in themselves. Lastly the Physician may not be more or less than is fit; he carefully observe, what is, and is not dilated. And he sends it to other place, Essences also, Essences and Magisteries of the Medicines, restore the Body, set the Patient on his Legs, he Cures Quotidians, Continuals, and Diaries, and thinks there are above two hundred several sorts of Fevers.

He makes the Cure of Fevers the Stomach Two-fold, C. 2. *de Tart.* therefore Purgations to be used without Digitation, *Laudanum* Pills, according to are to be given before the Fevers he would have all Medicaments Fevers to be given before that they may Operate together with it. Every thing that operates should be order'd so as to both upward and downward, this Purgations with a Vomit should be an *Arcanum* and Galenical. For Tartar it is a Specifick Subject in the *Arcanum* are Centory, Hellebore, Scilla, Colocynthis, &c. In the same place, Chap. 7. he Describes Pills. He makes a Three-fold Cure for Fevers of the Liver; Depp-

Mandification; and Instauration. For Fevers in the Reins he recommends *Alcali* of Shells, Crymmy, &c. Sweet-oyl of Nutmeg, of Vitriol; and in other Fevers he commends Opiates. And Chymical Followers mention a great many things more, some of which we shall speak of when we come to our own Opinion.

§. 16.

Helmont has one Cure for all Fevers, but discommends Bleeding, which is the only Remedy which the Galenists use in this Distemper, and brings an Example of a Patient who was Blooded so often, that his Body was open'd, not a drop of Blood was found in his Body, and yet the Fever did not abate to the least, but rather kept its Circuit and Remission. And the Author further adds, that Bleeding steals away the Spirits, so that the Patient's Strength is not so soon recovered, and the *Crisis* is put by, so that if the Patient do grow better, it is not till of a long time, and with some fear of a Relapse; but they are easily recovered without Bleeding. *Helmont* farther adds, that by Venesection a Passage is made for Corruption to the Heart, than prevented by Bleeding. Besides, he saies it is a Ridiculous thing to think that Venesection can cause Revulsion; because the Febrile Matter does not stay in the Veins, but sticks to the inside of the Vessel, so that it is not removed by Venesection, but by Venesection nothing that is to be removed, because it Acts without the Knowledge of the End; and the next which is the nearest goes cut, which is followed by the next

to that, for fear of a *Vacuum*; and by this means the Terms also are stopt, which makes *Helmont* brag, he can Cure all Fevers without it. Besides, the Turks and other People are Rescued from Fevers, who yet know nothing of Venesection. Both *Helmont* and *Paracelsus* extol their *Arcana's*, which, as they Brag, never failed them. For, they say, they have Cured all Fevers with one single Dose of *Mercurius Diaphoreticus*, and an Hectic in a Months time, and a Quartan with one Draught of their *Arcanum Coralinum*. For in *Helmont's* way of Curing Fevers, the occasional cause is not only to be considered, but the Dignity and Perturbation of the *Archæus*; and those things which offend Materially, are easily forced by Nature, the Confusion of the *Archæus* ceasing, as soon as they are reached by the *Arcanum*.

This Author Brags, he has Cur'd Fevers without Blood-letting, and that he allow'd his Patients Wine; Nay, he says, that Person does not deserve the Name of a Physician, that cannot Cure a Fever within the space of four Days; and this is that Sudoriferous Medicine, viz. *Mercurius Diaphoreticus* which Cuts, Attenuates, Resolves, and Grinds off the occasional cause wherever it be, which it often effects without Sweating. Yet, he saies, that particular Remedies which do not come up to an Universal Amplitude, are Salts of Cephalick Things, as Marjoram, and Rosemary; but they must be Volatile Salts, not *Alcali's*, and they must contain in them the *Crisis* of the Simples, such as Temper'd Diureticks, which should always be given upon an empty Stomach, and

before the Fit in Intermitting Fevers, and in Continual at any time. *Helmont* orders the Patient Beer Coloured with Wine, and a Crust of Bread, not so much for Nourishment as Humectation. He is against Cordials of Alkermes, Pearls, and Gold, because neither Gold nor Gems do inwardly refresh Nature, in that they do not Symbolize with our Spirits, which *Petronius de Victu Rom. c. 4.* does confirm. But the only Intention of this Author is to Cure a Fever by Sweating; for the *Archæus* commonly Enflames it self by its own Exandescence, and pours forth a Hot Sweat, shewing the Phylician the way how to Expel that Feverish Heat, viz. by Diaphoreticks, which are the only Appropriate and Specifick Remedy in Fevers.

§. 17.

AS to what concerns *Antidotes* his way of Curing Fevers, especially Intermitents, he has these following Intentions: First, To restore the Blood to its Natural Temper. Secondly, To prevent (as much as may be) the Depravation of the *Succus Nutritivus*. Thirdly, To hinder a Feverish Fermentation, for fear a Fit be caused. And he thinks that in the Cure of this Distemper, more is to be Attributed to Nature, and an orderly Diet, than to Physick.

To satisfy the first Intention he commends Vomitories, Venesection, and Purgation, which are to be Celebrated and Administred in the beginning of the Disease; but afterwards to be omitted as doing little Good, Nay, that they often do Hurt; it being a thing Notorious,

that a Tertian Ague is seldom cured at all Cur'd by these Remedies when used too late, and that by it often turns to a Quotidian. And this Author knew some in perfect Health, who by taking a Vomitive for Prevention in Spring time, and causing a violent Evacuation, have fall'n predestinate to a Tertian Ague: Others known to have suffered a Relapse because the Morbifick Matter lay asleep, was by Purgation stirred up again: And therefore he prefers gentle before strong Catharticks. He says, Vomitories do great good both by Evacuating the Stomach, that Concoction may better be performed, and that by the *Chymus Nutritivus* of the Blood is to be made more pure; and especially by emptying the Gall-Bladder, Copiously forcing Choler out of the *Meatus Choledocus*, that by it being more plentifully drawn out of the Mass of Blood, it may be Purged of its Saline Residue and Adult Sulphur. Of Venesection he says, that it Cools the Blood, and hinders it from being too Hot, and as it were refined, and makes it more fluid without danger of Adustion or Stagnation in its Vessels. He says, that Purgative Evacuates, and by this forces Choler out of the *Vena porta*, and consequently out of the Mass of Blood. To this end he so reckons Digestive sharp purging things (to Wit, to reduce the Blood) for they fuse and alter and temper its Heat. This Author also tells us, that sometimes a change of Soil and Air doth more correct the bad Constitution of Blood, better than any other Medicines.

His Second Intention consists in
 stricts of *Diet*, which in Fe-
 ought to be light and sparing;
 what we commonly say, *Hunger*
the best Remedy against a Fever.
 it is an Experienced thing that
 it is very often delayed, Nay,
 driven away through Abste-
 nences and Fasting. For which
 our Author advises a slender
 forbids the use of Sulphure-
 or Spirituous things, that so the
 of the Blood may be abated.
 he would have no Meat to be
 when the Fit is coming; for
 it is both gentler, and is easyli-
 sooner Terminated when the
 is Fasting.

His Third Intention which is to
 the Fit, is performed by
 Remedies which stop the Fer-
 mentation of the Blood. And they
 are chiefly to be used, and do
 good, when other Medicines,
 Infection have been premi-
 of which more hereafter.

§. 18.

Of *Pneuma* makes the cause of Inter-
 mittent Fevers to be the Pan-
 creatic Juice, which by Reason of
 corrupted Phlegm, obstructing
 the lateral *Ductus*'s of the *Pancreas*
 Stagnated, becomes more A-
 cid and Sharp; and making its way
 through this obstructing Phlegm,
 to the *Tenuæ Intestinum*, and
 meeting with *Choler* and *Pi-*
mentum Intestinalis, raises a vitious
 fermentation: Afterwards stealing
 with them, some way or o-
 into the Right Ventricle of the
 Heart, and irritating it by their A-
 cid and Flatulency, cause
 not only a more frequent
 but over and above, several

ways alter and disturb the Vital
 Effervescency, and the Sanguificati-
 on it self. The Cure, according to
 this Author, is to be Effected, First
 by cutting and dissolving the more
 or less glutinous and coagulated
 obstructing Phlegm; which Viti-
 ous Matter must be remov'd from
 that place, and carri'd at least as
 far as the *Tenuæ Intestinum*, or
 else wholly Excluded the Body. Se-
 condly by Tempering and Correct-
 ing the Acidity and Copious Acri-
 mony of the *Succus Pancreaticus*.
 Thirdly, by preventing or amend-
 ing the Vitious Effervescency.

This Author is of Opinion, that
 the obstructing Phlegm may be
 best cut and dissolved by Medicines
 Impregnated with Aromaticks and
 Volatil Salt, but with this Caution,
 that the whole Body be kept warm,
 either with Exercise, Fire, Baths,
 or Coverings, that the Virtue of the
 Medicine being every way dispersed
 may also reach the *Pancreas* it self,
 and its lateral *Ductus*'s, which are
 the place affected, and the Fund of
 the Disease. And he commends
 them most especially for Melancho-
 ly and Phlegmatick Persons. To
 this end he advises about three
 Spoonfuls of the following Mixture
 to be taken about two Hours be-
 fore the Fit, and the Body to be well
 cover'd.

Take of Water of Parsly two Oun-
 ces, Fennel one Ounce, *Theriac-*
alis Simplex an Ounce and an
 half, Volatil Salt of Amber a
 Scruple, Syrup of *Carduus Be-*
nedictus an Ounce. Mix them.

But as often as the Nature or Pre-
 ternatural Constitution of the Pa-
 tie it is observed to be Bilious, he

uses Loosners, and inciding Acids.
V. G.

Take of Water of Fumitory three Ounces, *Sal Armoniac*, or *Tartar Vitriolated* one Drachm, *Antimonium Diaphoreticum* half a Drachm, Syrup of Fennel one Ounce. Mix them.

When a great many Phlegmatick, Gross and Bilious Humours abound all at once in the Patient, let him Drink a Mixture of the two Sub-contraries just now commended.

Take Water of *Cardus Benedictus*, Succory of each an Ounce and an half, *Theriacalis Simplex*, Destill'd Vinegar of each Six Drachms, Crabs-eyes Pulveriz'd half a Drachm, Syrups of the Five Roots an Ounce. Mix them, and give a Glas of them.

If the obstructing Phlegm be not very Glutinous, he affirms it may be dispers'd by one Sweat, and thereby the Fever cured.

When he meets with a Body full of Choler, but not much Phlegm, He gives a Vomit, three or four Hours before the Fit come, by the Help of which, not only the Superfluous Choler, (according to our Author) but also the obstructing Phlegm is forced into the *Tenue Intestinum*, from thence into the Stomach, and so through the Gullet, and out at the Mouth. To which end he does often with good Success administer a Vomitory *Sapa* prepared of *Vitrum Antimonii*. Purgers by Stool have, he says, the same Effect, provided those things

be mixt with them, which also cide and carry of that Glutinous Phlegm. E. G.

Take of *Pil. Fetida* Maj. Scruple, Trochiscs of *Alum*, *Mercurius Dulcis* of each Grains, Oyl of Amber Drops. Mix them and make Pills, which he would have taken four or five Hours before the Fit comes, and the Body easily moved.

The great Acidity and Acidity of the *Succus Pancreaticus* which contributes much to the causing a Fever, must be tempered, according to this Author by Volatil Salts, and all Aromatics not omitting Opiates. In this manner the Vitious Effluvia of that *Succus Pancreaticus*, Choler must be hinder'd and corrected, as was shown before.

§. 19.

LET us now give Description of the *Cautilian* Opus. We do believe that Fevers are Cured by the Excussio and pressio of the *Salino-Sulphurea* and Exotick Particles, by correcting the Viscidity or Acidity of Chyle, or by setting to right the disorder'd Mixtion, and by disposing the Spirits, and mitigating the pressing Symptoms.

As to the first Indication; is, That those Feverish Particles be excus'd; The Galenists cry Blood-letting as the most Sovereign Remedy; because their Master *Galen* teaches, *lib. 2. Method. Cap. 15.* that Bleeding is wholefome in all Fevers and

a putrifying Humour, not in the Continual ones, but all others. And though *Asclepiades*, *Chrysippus*, *Ondius*, *Erasistratus*, and *Aristogenes*, all famous Physicians, and *Helmont*, in his time, never breathed a Vein in the Distemper; yet others, as the *French* generals, whom the *French* generals follow, are so free that way, they seldom omit it in any Distemper.

We know by Experience that bleeding in Fevers (because it does more disturb the Blood) has been very hurtful. Nay, to prevent Diseases, it has been frequently used, that it has been very for Fevers: Yet we are so ignorant that by letting Blood before the Fit, the Fever has not that very Instant been removed. Therefore it is our Opinion that these following Rules are to be observed. Venesection signifies nothing where those Particles do stick closely to the Pipes, and are already mix'd with Chyle, and whole Masses of Blood; for by this means the Blood is exhausted, that the rest of the Blood is not sufficient to drive those Particles out of the Body. But it is when the Particles are only lodged in the Masses of Blood, or in the Lympha; for then they may be carried off with the Blood, and being once gone, those few left behind may with less difficulty be overcome; and so the Distemper struck down at one blow. Therefore in Putrid Fevers, it is to be opened at the very beginning, and before those Particles are fixed in the Blood. Which *Hippocrates lib. I. l. 29.* also affirms. If any thing

be to be moved, do it in the beginning of the Disease, especially in those who abound with *Serum*. In Continual and Symptomack Fevers, Blood-letting, as occasion requires, is far more proper than in Intermittents. For it is certain by Experience, that being unseasonably used, it has for the most part chang'd a simple Tertian, into a double one. It is much better for those, who are strong, to let it alone, but always Circumstances of Age, Climate, sort of Fever, (we think it is best to omit Bleeding in Malignant Fevers speaking here only of Putrids and Intermittents) Country, and time of Year, ought to be considered; for it is so improper in Autumn, and in the Spring-time, when the Fit is present, that the Physician had as good stab the Patient as Bleed him then. Sometimes the Blood, when it is let out, appears like Black, Livid, Green, &c. Gore. But these Accidents, according to *Helmont*, are not Signs of Corruption, but only of an Effervescency and fermentable Disorder.

The same is to be observed of Purging Medicines, which are either to be given in the Beginning, or else quite omitted; and all strong Purgers are hurtful. Besides, they do rather cure a Cacochymy than a Fever. For I have observ'd, with the excellent *Willis*, That a Tertian Ague is seldom or scarce ever Cur'd by Purgers that are given late, and that it often turns to a Quotidian. I have likewise, as *Willis* has done, known some that were in good Health, by taking an Emetick for Prevention sake, fall presently into a Fever, by reason of the *Serum* being exhausted; and I have seen others who by Emeticks

have been quite spent and Emaciated, and some others are observed to have thereby been Cur'd of a Fever, so that we must use them Cautiously; and a gentle Purge is better in the beginning and end, than one in the height of the Disease, tho it be strong. An Infusion of *Senna* with *Rhubarb*, *Yellow Saunders*, with *Salt of Worm-wood*, and some bitter Syrup may be given. *Tamarinds*, because they are somewhat Acid, are Extraordinary good in Fevers; especially if there be a *Cholerick Temperature*.

Take of *Extractum Catholicon* fifteen or twenty Grains; and if *Phlegm* abound, two or three Grains of *Trochisces of Alban-dal* may be added. *Tartar Vi-triolated*, and *Cream of Tartar* alone often do the Work.

If the Purge does not leave working, but more Stools are expected, the Patient must not have any other Medicine. For they do madly, who one and the same Day both Purge and Sweat.

But Purging is altogether improper in Fevers, except there be a *Cacochymy*; for the Disturb'd Mixture of the Blood is not regulated thereby; whether it be *Requisite* or not, the Physician may in some sort guess by the loss of Appetite, Vomiting, &c. for that is usually a Sign that the Stomach is Clogg'd with ill Humours, which should first be Evacuated; for else, if a Sudorifick should be administred when the Stomach is thus Burthened, the Medicine could not be able to pass, and so a Vomiting would be provok'd; and for this Reason Antimo-niate Vomitories given in the be-

ginning are the best; for often the Vicious Chyle is carry'd off by this only Remedy.

The main business of the Cure of a Fever lies in this; To remove the Obstruction of the Pipes, in which those Particles lie, which have made Acid by staying there so long, which do in time cause a Fever; and to take away the Viscidity or Acidity of the Chyle, especially in Intermittents, and to assuage the Heat of the Spirits. It is also a common Rule with us, That cold things never to be given in Fevers, because they obstruct; but we give *Cinnamon*, as *Lapis Prunella*, and *Campden* for these do not obstruct, but rather open Obstructions. Therefore let such Sudorificks be given, which may remove Obstructions, precipitate the Febrile Ferment, lessen the Acidity of the Chyle, and Extinguish it against the following Fit. For hereby those Acid Particles may not only be Corrected, but discharg'd through the Pores of the Skin: for the Pores and little Vessels of the Glandules being open, is the Reason of the Relaxation of the Nervous Intercutaneous Fibres, the Skin being thereby made more or less soft, rare, or vaporous, so that Sweat may be transcolated as were through a Streiner. But the Sudorificks which are used in Fevers, are too many to be reckon'd up. Some commend *Mercurial* Salts, others Volatil, some Acid, and others Essential Salts.

Sometimes they successfully give in Fevers Diureticks, or things that provoke Urine, especially in Intermittent Fevers, that is, if the Constitution be such, as no great Quantity and Toughness of Humours be in the way: yet however the most temperate

erate and gentle ones are to be made choice of, such as can open the Passages, and Obstructions of the little Pipes, and expel the Acid Particles; as, of the five following Roots, *Asparagus*, *Saxifraga*, *Restharrow*, *Madder*, *Goose-wood*, which are specifically available. The Herbs *Millefoil*, *Saxifrage*, *Wormwood*, *Agrimony*, Seeds of *Carrots*, *Fennel*, Berries of *Juni-ber*, *Sal Prunella*, Spirit of Salt, Sulphur, Tartar, Oyl of Sulphur, &c. And we must take notice that all Medicines in all Intermitting Fevers, must be taken about four or five hours before the Fit; to the end that the Febrick Matter may be driven from the approaching fermentation, and the Cause be interrupted. For they then alter the Blood, when those Acid Particles, are driven out of the Pipes, or the bad Particles are already got to the Blood; and if they be taken before, they do not correct the Chyle, but alter the good Blood, and neglect the cause of the Disease; the Time and other Circumstances must carefully be observed in giving Febrifuges, or else we lose our Labour. But when there is a Vomiting, Siege, or Hæmorrhage, Sudorificks must for that time be forborn, lest Nature be overpowered in her Operation. Now Sudorificks are Sharp and Acute, and are able not only to correct the Acid Feverish Particles, but drive them out of those little Pipes by removing the obstructing Matter. Therefore commonly the things that follow are conveyed, Salts of *Cardus Benedictus*, *Wormwood*, *Silvestris*, *Wormwood*, *Silvestris*, (which I reckon a Specific) *Fumitory*, *Scordium*, *Tama-*

risk, *Diascordium*, Rob of Elder, Bark of *Peru*, Trochiscs of Vipers, *Theriaca Andromachi*, Mithridate, Spirit of Harts-Horn. In Intermitting Fevers I esteem *Lapis Lazuli* as a great Secret, given from half a Drachm to a Drachm in Spirit of Wine before the Fit. Spirit of *Sal Armoniac*, and the Diaphoretick Powder of *Craanius*, prepared out of Antimony, is also often given as a Secret in Intermittents. Tincture of the Jesuits-Bark is an excellent Remedy, and is thus prepared.

Take of Jesuits Bark three Drachms, Salt of Tartar one Drachm, Spirit of Wine as much as is sufficient. Extract a Tincture according to Art.

Also Jesuits Bark may be given with Purgers and Sudorificks as occasion serves.

Take of Jesuits Bark one Drachm, Scammony six Grains. Mix them to be given in the end of the Fit. Or. Take of Salt of Wormwood, Jesuits Bark of each half a Scruple, *Diagridium* four Grains. Mix them, and make a Powder.

Gentian by many is esteemed of equal Virtue with Jesuits Bark, which in like manner may be often given in Wine, or in the Form of an Extract in Pills. Also a Decoction of Gentian, or of the Roots of Silver-weed, or of *Agrimony* may be of great Benefit. Likewise in my Neighbourhood the Martial Powder prepared of Bole, and mixed with some Drops of Oyl of Cloves being given before the Fit,

has

has a great esteem. I am wont to prepare a Febrifuge Salt, and to give it with Spirit of fixt vitriol four Hours before the Fit, which is no Contemptible Medicament.

Take of *Mercurius Dulcis* fifteen Grains, *Crocus Metallorum* three Grains, *Antimonium Diaphoreticum* six Grains. Mix them.

In Continual and Intermittent Fevers, that *Panacea duplicata* is of great Repute, which being given to the quantity of a Drachm with Crabs-Eyes in a convenient Liquor, has seldom frustrated my Expectation.

As to Mineral Waters and Baths, they may be used according as the particular Constitution, and the present occasion require. But of these we shall speak, when we shall treat of Fevers in Special.

As to Amulets in Fevers, they may be used or omitted. I have notwithstanding seen many Effects by this which follows. But whether or no it might not be by accident, I was never able to Judge.

Take the Nine Species of Herbs with Jews Bread and common Salt, put them in a Bag, and let it Hang for Nine Days at the Neck, after which, throw it in a River. It hath given great help in Intermittents, and often in Quartans.

As to what concerns Leech Scarifications, Veficatories, Infusions into the Blood, we will treat separately of each below.

Amongst other External Topicks we reckon the Febrifugal Powder of *Strabelberger*. Rue Marjoram in its own Vinegar, applied to the Wrists of the Hands, and the *phena* in the Foot (where the *phena* turns aside) is thought to do much good: Also a Pickled Ring cloven in the middle and laid to the Soles of the Feet, and likewise a Tench. Spirit of Wine with a little Salt, is wont to be applied to the Head and Feet. *Mithridatus's* Oyl of Scorpions, mixed with Treacle, and the Back Bone chaf'd therewith before the cold Fit, is said to be most available.

C H A P. II.

Ephemera: or One day Fever: and a Pure, Simple Continual.

§. I.

Whatever hitherto we have said in General, has been covered with all possible Brevity: now we shall in order relate, by the Way and Method every Fever particular may be known and I judge therefore we ought begin with *Ephemera's*, partly because they for the most part go for other Fevers, partly because they are the simplest and easiest of all, and to speak improperly, are ordered by Nature her self. It is so called by the Greeks from the Preposition *ἐν* and *ἡμέρα*, a Day, as we should say *lasting one Day*. before the Latins call it *Diaria* in its Duration. Some think it is called from an Animal, mentioned by Aristotle l. 5. de naturalium, which is Born and lives in the space of one day, and is called an *Ephemeron*. This Fever is either short, or long, or very long. The short is called an *Ephemera*, the long a *Simple Continual*, the very long a *Fermentative* or *Putrid Continual*. But since, in our opinion, these Fevers differ only in degrees, according as the Blood is more or less disturbed, and for that reason the Cure differs only in the degree of Medicines more or less efficacious, we therefore will handle

these Diseases in the same Chap. An *Ephemera* is described to be a very little perturbation of the Blood, usually arising from the incongruity of the Air, which binders insensible Transpiration. But in a Continual Fever the perturbation of the mixture of the Blood is more violent. An *Ephemera* is divided into one Simple, which lasts only for one Day, and one Extense, which lasts for more. The most usual Difference of a Continual is in regard of the Increase and Decrease: when the Heat keeps the same Tenor till the Crisis, it is called *Hæmotonos* or *equal*: When it always increases, it is called *Epacmastica* or *Increasing*: When it always Decreases, it is called *Paracmastica* or *Decreasing*. For Men commonly Measure the Increase or Decrease of the Fever, by the Increase or Diminution of the Heat, but in my opinion it might be better measured by the more or less troubled Mixtion of the Blood.

§. 2. Subject.

THE Subject of these Fevers is by the common Consent of Physicians reckoned to be the Spirits; but it is rather the Mass of Blood, in which a disturbance is raised, and the Vessels of the Parts, in which obstructions are made.

§. 3. Dia-

§. 3. *Diagnosticke.*

THE Diagnosticke Signs of these Fevers do follow. They begin with a small Chilnefs, but in a Continual with a great one, then a Febrile Heat follows the Chilnefs, and sometimes begins the Fever, and holds from the beginning to the end, without any Paroxyfms: Only, as was faid before, sometimes it keeps an equal pace, sometimes it mends, and sometimes it slackens it, till by degrees it ceafes. The more remifs and mild the Heat is, the shorter is the Fever, as in the *Ephemera*, which they call gentle and halituous, where the Skin feels foft and fmooth. The Heat is ftronger and more violent, if it laft long in a Sanguineous Continual, fo called from its caufe; sometimes with the acceffion of a little Acrimony in a Continual, which they call Bilious. The reft of the urgent Signs are common and familiar to other Fevers, a Throbbing pain in the Head, Thirft more or lefs, bitternefs of the Mouth in a Bilious one, Reaching, Vomiting, Lofs of Appetite, Inconcoction, Loofnefs, Roughnefs and Hardnefs of the Mouth and Tongue, which are attributed ufually to Humours firft gathered in the Stomach, and then Putrefying there, reftlefsnefs and wearinefs of Limbs, waking or deep Sleep, thick Breathing and Heat of the *Præcordia*, a quick and frequent Pulfe, and sometimes a ftrong and great one, yet not an equal or difordered, Red Urine, a Red Swollen Face, Turgid Veins, foft Skin, but in a Bilious one dry. The Urine, if thefe Fevers prove fhort, does not differ much from the Natural, but if long,

it is Red and Tinged; The Sweat which often burfts out fooner than it ought, does neither fmell ftrong nor is troublefome; but in Putrid ones a Stinck is as eafily perceived in the Sweat as in the Excrements of the Belly. But a Simple Continual is often Exasperated about Evening and after Eating, the reafon whereof is this, becaufe in fimple Transpiration is checked by the Pores of the Skin being clofed towards Evening. This Fever lafts not above four or five Days. This is a Continual, called *Putrid*, or *mentative*, wherein sometimes Spots appear, which denote a great Perturbation, and a Volatil Salt be in the Mafs of Blood; the Pulfe alfo in this Fever is very quick and unequal, and that efpecially becaufe of the great Fermentation of the Figured and difordered Particles hence comes an Irritation of the Heart, and by confequence an unequal Pulfe, which depends upon a ftrong Influx of the Animal Spirits into the Heart, and Fibres of Arteries. Sometimes there is a heavinefs, and puffing up of the *Hypochondria*, sometimes *Deliria*, a moderate Watching, Anxiety about the *Præcordia*, and Swooning with a Cold Sweat. But if the matter tend to the Nervous kind, there arifes Trembling, Shaking, Cold, Pains, Convulfive motions, Spafms of the *Vifcera*, Stupor, Phrenzy, &c.

§. 4. *Caufe.*

THE Ancients fay, That a Heat, either External or Internal, is able to raife thefe Fevers, but the better the temper of the Body is, upon which they happen, the

the *Ephemeræ's* are. For a well tempered Body, if it be inclined by Adventitious Causes, the Heat cannot continue long, must needs shorten a Fever, *Ephemeræ's* and short Fevers, according to them, are bred, which last in one day, where the Heat is moderate and breeds no disturbance to the Body, and when it is not in the least impure: This Fever usually begins without a Chiliness, and ends without a *Crisis*, by insensible Transpiration. They say, that Simple Continual Fevers last the longest in a Choleric or Sanguine complexion, because the Heat is encreased by these Humors, and they say it by this, for that young, thick and hot nated People, such as have had the *Hæmorrhoids*, or a *Hæmorrhage*, or the *Menses* upon them, are most subject to this Disease. But if this Diary ever find a foul Body, and the Blood be apt to Putrefy, it continues no longer a Simple and short Fever, but when the Blood is Putrefaction, these Simple Fevers are by a sad *Metamorphosis* changed into long Putrid Continual.

The Galenists distinguish Putrid Fevers into Continual and Intermittent: They say, that Continuals are bred, when the Putrid Vapor, or Prematural Heat, which arises from Putrid Humors, afflicts the Heart continually, and produces a constant Heat therein, whence, as they say, the Heat of the Fever is continued all over the Body. Or they say, Intermittent, when the same Vapors are carried to the Heart at certain intervals of time. They again divide the Continual into Essential and Primary ones, or Sym-

ptomack. They are called *Essential*, when the Putrefaction is kindled in the common Veins, and not in the private Parts; but *Symptomack*, when Putrefaction or Suppuration is made in some particular part enflamed, from whence Vapors may be Communicated to the Heart by the common Vessels, such as appear in a *Pleurisie*, and in other Inflammations. Some are called *Continual Tertians*, which are worse every third Day, some *Quotidians*, which are worse every day; and others *Quartans*, which have a Fit every fourth day, and they make many other unnecessary Divisions.

They affirm, that Putrid Continuals are bred of Putrefaction of Humors, which are contained in the greater Veins and Arteries, and that, according to the Various Nature of the Putrefying humors, there are various sorts of them. From which Putrefaction, they say, Vapors ascend to the Heart and Brain, and hence commonly they derive all the Symptoms that Occur in this Fever.

The Galenists place the Cause of a Putrid Continual about the Heart, and in the *vena cava*, and the Seat of a Diary in the Vital Spirit and Heart it self.

§. 5.

According to *Paracelsus* the Cause of these Fevers is a Fetid Sulphur, with a dissolved Mercury, and an impure Salt gathered usually in the Region of the Liver; and he asserts, That these Fevers arise from Nitro-Sulphureous Impurities.

§. 6.

HElmont, making the Seat of a Diary Fever to be in the Cavity of the Stomach, holds, That it arises for the most part from Corrupt Meat, and he proves it by this, That this Fever ceases only by Vomiting. He attributes the cause of a putrid *Synochus* not to Galenical putrefying Humors, but to a Corrupt Vagrant Acidity, which irritates the *Archæus*. This *Archæus* is provoked by some occasional cause, which is like a Thorn, because of the *Blas*, which it has from the Soul; and this *Blas* sometimes is in such a Fume, that it makes the *Archæus* Angry and Fiery. The occasional cause often arises from hence, That the Chyle is made more acid than usual, through some fault in the Stomach, and being carried into the Veins of the Mesentery, by the fault of the Duumvirate, it causes these Fevers. The Galenists also according to our Author do admit in bringing the Example of Dung, for illustrating Putrid Fevers, which, if Putrid, grows Hot: But, he says, the more it Putrefies, the less Hot it is, nor is it Hot at all, if spread abroad. Therefore it only grows Hot, when it is gathered Wet on an heap; so Hay likewise is set on Fire by the Spirits of its own Salts Compressed. Heat, in our Author's opinion, is not a Fever, but it is a certain *Blas* arising by propriety from the *Archæus*, to which Cold as well as Heat is Natural. Therefore the *Archæus* is the only Efficient of Heat and Cold, which are passions of Life, that the *Archæus* moves by its proper *Blas*. Whence, though a Carcase putrefy,

yet there is neither Heat nor Cold in it.

§. 7.

THE cause of this Fever according to *Willis*, is a vitil and Spirituous Portion of Blood, too much Exagitated and Heated, which oftentimes, Wine, Boils and Ferments may on any small occasion. But when on a long Agitation and Effusion of Spirituous Blood, the Gross Sulphureous Particles do at last take Fire, then they last above ten and twenty Hours, and are called *Ephemer* of several Days, or simple Continuals, and not Putrid. And the cause of a Putrid Continual is the Oily or Sulphureous part of the Blood, which being too much heated is above measure Turbulent, and takes Flame like Wine, which is too high exalted by its sulphur, or like moist Hay, it grows Hot of it self for want of Ventilation, whereupon immediately the whole Sea of Blood is rarefied, as it were kindled in the Lungs and Heart, (wherein Accension is made through the Fault of the Air) but it is carried by a most Rapid motion through the Vessels, and by a Deflagration disperses many *Ephemer* via of Heat. Hereupon the whole Mass of Blood (like Water on the Fire) boyling up continually Distends the Vessels, Vellicates the Brain and Nervous parts, raises Convulsions and Pains in them, by an Effervescence usually dissipates the Vital Spirits, destroys the Ferment of the *Viscera*, hinders the Office of Concoction and Distribution, often depraves the Nutritious juices designed for the Nervous kind, so

hence disorders of the Animal especially do follow, yea, the whole Oeconomy of Nature in a manner is perverted.

§. 8.

Reckons the six Non-Natural causes, used amiss, for causes of all Diary Fevers. Therefore he thinks it may arise from the Heat of the Air, or from Fire, or a Bath: for a Diary Fever is usually caused by Cold coming from the Heat of the Body, so it is by Generous and very Spirituous Wine, especially if it be Aromatick from too much motion of the Body. This Ephemerical is usually caused by the Passions of the Mind, Anger, Grief, and so is a Simple Continual, and is not Putrid. He has observed this Disease to be caused by too much watching. And, beside a vehement Pulse, several observable symptoms appear in Diary Fevers for the Notification of causes or conjunct.

He says, the cause of Simple Continual is sometimes Bile, sometimes Blood, sometimes both indisposed, producing a sort of Effervescence in the right Ventricle of the Heart. Therefore he asserts that there is always a preternatural Pulse; and according to the diversity of the cause distinguishes continual Fevers into Bilious and Lymphatick: Under the Name of *Lympha* he also comprehends the Pancreatick Juice, the Urine and Liquor arising from the Animal Triumvirate.

The cause of Putrid Continuals, which trouble the Patient with a violent and constant Heat, he attributes to the Acrimony and too

great Inflammability of the Bile, whereby, he says, that a Vicious Effervescence is perpetually raised, not only in the Right Ventricle of the Heart, but also in the *Intestinum tenue*; especially by the Pancreatick Juice's Flowing thither by little and little, being made too sharp by its Stagnation, and so causing a Paroxysm. And therefore he thinks there is an Obstruction in one or more passages of the *Pancreas*, and reckons the Cure must be directed thither.

§. 9.

VV and the *Cartesians* place the cause of a Diary Fever in a small Perturbation of the mixture of the Blood. Wherefore the external Air, by reason of its Particles, is able to disturb the mixture of the blood; which Mixture, as it is variously disturbed, causes various sorts of Fevers. Yet the hindrance of insensible Transpiration alone does not produce a Fever (for then all Men in Winter, when insensible Transpiration is hindered, should have a Fever) but only such a hindrance as disturbs the Blood. This Disease is usually produced by hindrance of insensible Transpiration, and by obstruction of the Pores. In the Fits we feel Cold, by reason of the little motion of the Blood; but then again, when this thick Humour is more actuated by the Animal Spirit's flowing into the Heart, then it moves faster, and therefore we feel Heat. The Patient thinks he is Cold, which he is not, the reason is, because Cold is usually the cause of shaking, therefore the Soul judges, when the Body is troubled with a Shaking, that it is Cold, which

which yet does not follow: for the Saline or Acid Acrimony, Vellicating the *Panniculus Carnosus*, causes a Shaking; yea, in Child-bed Women the coming of the Milk may cause this Fever.

But in a Putrid Continual the Mixtion of the Blood is more disturbed; yea, so much, that the Fermentation of it is not able to conquer and restore the bad Mixtion; because the Peccant Humor is pertinacious and continually glides out of its Receptacle into the Blood. This Disease has often its rise, from Cold Drink, and too much Exercise, when the Body is very Hot, and all the Pores are altered on a sudden, so that insensible Transpiration is hindered. Violent Exercise, as is said, and Drinking much Wine may deservedly be reckoned among the External Causes, inasmuch as by moving the Blood much, and recovering the Humor out of its Receptacle, they wash it out of the *Viscera*, and carry it into the Blood; which Humor then has the Pores of its Particles so changed by its Stagnation, That the foreign matter of the first Element passes through, and disturbs the mixture of the Blood. Yet this Cause of it self can never produce a Fever; for thousands of People Exercise and Drink too much, who fall into no Fever. But we must observe this, that such Men as fall into this Fever upon such a cause, must needs have many peccant Humors in their Vessels: Wherefore it will be proper for such people to Purge, that these Receptacles may be washed out. Great restlessness attends such as are troubled with this Disease, which arises from hence, That much Volatil Salt is found in their Mass

of Blood, which by Vellicating the Nerves opens them, and Patients out of their Rest tumble from one side of the Bed to the other, and expose themselves to the Cold Air, insensible Transpiration is hindered, and so the Volatil Salt, which would otherwise be removed by insensible Transpiration, remains in the Body, and by further Vellicating and Pricking the Nerves continually encreases their disturbance, sometimes causes Death.

Scholastick Authors do not explain, how Putrid Fevers arise from the not Putrid, they say just that in Putrid Fevers there is an unequal Pulse; but this is only because the drops of Blood, that enter the Heart, are not all equally altered, which makes nothing for the difference of Fevers. According to us, Fevers differ only as the Blood is more or less disturbed; and therefore the Cure, as I said before, is only in regard of more or less peccant Medicines. Then in his opinion, they differ in regard of divers Symptoms, the Cure of which must be undertaken separately, as necessity requires.

§. 10. Prognostick.

AN Ephemera is not naturally dangerous, but easily cured, and often ceases of it self by a Sweat, without the Aid of a Physician. But because this often turns to a Putrid Continual, sometimes to a Heftick, through some Error in Diet or Medicine, therefore it must not be neglected. The Prognostick of a Simple Continual is, that it often degenerates into a Putrid and an Heftick,

Blood is much disturbed;
it usually ends in a Sweat
or Hemorrhage, within four or five

A Putrid Fever is dangerous,
is a great disease, seeing the
of Life, the Blood, is affe-
and much disturbed; whence
turns to a Malignant Fever.
life, which decreases, that
which increases. It goes
Sweat and Urine, when the
in these parts are open, some-
it ends in an Hemorrhage,
in a looseness.

II. Dietetick Cure.

Concerning the Diet, which is
handled very Copiously by
in an *Ephemer*, I shall
because this Fever lasts
The Air must here
considered, not only on ac-
of its Coldness, but, as
on account of its Particles,
may very much disturb the
of the Blood. For by
excessive coldness of the Air
the Transpiration is hindred,
also disturbs the mixture of
Blood; thereby also a tough
gross Humor is bred, which
obscures something: Let the
also have a care of too hot
things, nor let him expose himself
to the Sun, Baths, &c. because
these things may cause a Fe-

to the Food, it must be spare;
abstinence is often the best
according to *Celsus*, who
Many great diseases are cu-
by Abstinence and Rest.
Motion and Rest, Sleep and
and the Passions of the
be moderate.

But in a Simple & Putrid Conti-
nual, let the Air be temperate, serene
and pure; for one too hot or too
cold does harm. Let the Meat be
of good Juice and easie of digestion.
It must be moderately taken,
out of the Paroxysm: for impure
Bodies must not be fed. In the ve-
ry Paroxysm; according to *Willis*
his opinion, it must be totally sub-
tracted.

He also advises the Drink to be
moderate, that is, a Decoction of
Harts-Horn, with Raisins and Scor-
zonera Root, well wrought small
Beer, into which altering Tinctures
may be dropt, to Wit, of Roses,
Violets, Vitriol of Mars; Vitriol,
Salt. Wine must wholly be ab-
stained from, or it must be corre-
cted with Acids, and Drunk rather
for Gratification, than to Satiety.
Much drinking of wine is very hurt-
ful, upon which Patients are very
apt to fall into an Epilepsy; as I
have observed in my practice: for
any Spirituous drink moves the
Blood and Animal Spirits very
much; and therefore too much use
of Cordial Spirits is hurtful, because
they exagitate the Humors.

Great and violent Exercise also
does hurt: in like manner too long
Watching; but especially Passions
of the mind; Anger, Grief, Care, &c.
are naught.

§.12. Pharmaceutick Cure.

FOR the Cure of an *Epheme-
ra* the Ancients were wont to
use Bathing in warm Water, of
which they also made great use in a
State of Health. Then they kept
a Cooling and Moistening Diet of
Barly Cream, cooling Broths, Ju-
leps of Fair Water and cooling
Syrups, &c.

Ccc But

But according to the Diversity of Causes they a little vary the Cure. If therefore an *Ephemera* came from the heat of the Sun, they used a cooling Diet, and transported the Patient into a cooler place, applying an *Oxyrrhodinum* to the Forehead and Temples. If the Fever came of Cold, especially when the Patient, hot with Exercise, had exposed himself to a cold Air, then they gave a Sweat, with their usual Sudorificks. If from labour, they ordered Rest, and a fuller Diet, but ease of Concoction.

If Anger caused it, they ordered Cheerfulness; if Watching, Sleep; if Fasting, a good Diet; if Surfeiting, abstinence from Meat; if Obstructions and Cacochymy, Purgatives; if a Plethory, Bleeding.

They say, the cure of a Simple Continual consists in Evacuation of Blood, cooling, and opening of Obstructions: Therefore *Galen* 9. lib. Method. c. 4. performs it with two principal Remedies, that is, by letting blood till one faint, and by drinking Cold Water. However the wiser sort of Galenists dare scarce practise such Bleeding; but think it is sufficient, if such a quantity of Blood be taken away at several times, as is necessary for the cure of the Disease. As to the plentiful drinking of Water, *Galen's* Disciples do not admit it, but instead thereof substitute divers cooling Juleps of a Decoction of Barly, Endive, Sorel, Cichory, &c. also Emulsions and distilled Waters. Externally they apply cooling Epithems to the Liver, and Liniments of the same quality both to the Liver and Loins of *Unguentum rosaceum, refrigerans Galeni, Santalinum, &c.*

In a Putrid Continual, has more violent Symptoms, order Bleeding and Purgings: their whole Cure consists in three things, Bleeding, Purgings, and Cooling. Therefore they divers Juleps, and several Cooling. But I am weary of saying down, what all practical Doctors are full of.

§. 13.

THE Paracelsus says That these Fevers are nitro-sulphureous and impure: therefore they commend all distillations, Medicines, especial purging with nitre: for according to them, a Fever is carried off by such a distillation. For correcting the peccancy of Salt, especially in Putrid Fevers, *Elixir Proprietatis*, and other things, which you will see with hereafter.

§. 14.

HELMONT, who places the Cause of an Ephemera in the peccancy of the Stomach, and says That it often arises from a Plethory of Meat, cures it by a Vomiting. In a Putrid Fever he commends the use of Appropriate and Specific Remedies, especially his *Mercurius sublimatus*, wherewith, he says, he cures Fevers at once taking. The Remedy nevertheless he commends. He also highly extols *Arcana* of *rallinum*, but when we are told of it, he recommends a particular Volatil Aromatick Remedy, which given in these Fevers never fail the Physician.

He asserts, That Vomiting

often do good, while up-
the Stimulation of one thing,
throw off another, that is rea-
sonable near it.

§. 25.

Willis his Curative in-
tentions in a Diary
are to check the heat of the
and to procure free Tran-
spiration. For which, he says, Ve-
tion, a very low Diet, or ra-
Abstinence, cooling Drinks,
Clysters are good: but, he says,
all things, Sleep and Rest do
good, which being wanting,
they ought to be timely
by Opiates and Ano-
as well as we acknowledge,
in a Putrid Fever the mixtion
of the Blood is disturbed by an
excess of Sulphur. And he in-
tends, That in this Fever four
things should be observed; that is,
the Beginning, Increase, State and
Decline, which in some are over-
done, in others later. And if this
Fever be violent in the Beginning,
it suddenly fire the whole Mass
of Blood; if it hold on constantly
and equally with violence of Symp-
toms without Remission, for the
first part within four days the
Fire will so blaze, that the adult
Fever, which makes the *Crisis*,
will come to a full Turgescence: But
if the Beginning be slow, and the
Fever often interrupted, it will
not rise to the height about the se-
cond day: And if the Disease be-
comes more remissly, the State of
the Fever is usually protracted to the Ele-
venth or fourteenth day. He also
intends, That the Critical Moti-
ons in this Fever happen on the

fourth, seventh, eleventh or four-
teenth day, not by direction of
the Planets, but through necessity
of Nature.

He has four general Intentions
about the Cure of Putrid Fevers,
on which the stress of the whole
Affair lies. 1. To free the Blood
from burning, and quite suppress
the Flame, or Fire, kindled in its
Sulphureous part, which often hap-
pens about the first Beginning of
this Disease. 2. To contrive, since
the burning of the Blood cannot be
quite quenched, that it may per-
form its Desflagration more mildly
at least, and with less damage. 3.
When the Desflagration is over, to
free the Liquor of the Blood from
the Recrements of the burnt, a-
cidult Matter, and afterwards to re-
duce it to the Natural Form and
Vigor. 4. To obviate all urgent
Symptoms.

He Judges therefore, that in the
very Beginning Blood should be let:
for by bleeding the Blood is Ventila-
ted, and the hot Particles being too
much Glomerated, and very nigh
Burning, are separated one from
another, just as Hay, that is apt
to take Fire, if it be exposed to the
open Air, its Burning is preven-
ted.

He will also have a thin Diet
kept, in which nothing Sulphure-
ous or Spirituous must be used. The
Bowels also, especially the firstways,
must be discharged of their load of
Excrements; for which end he com-
mends Clysters, and sometimes also
Vomits and Purges, but then they
must be seasonably administred. In
the Increase of the Fever, if the
Blood ferment too much with a
strong and violent Pulse, distend-
ing the Vessels very much; and if

Watching, Phrenzy or Head-ach be very violent, he inculcates a repetition of Bleeding, and at that time he thinks Sudorificks should be omitted; and that Opiates and Anodynes should rather be given, as things that fix the Blood and Spirits, and preserve its Texture. He also highly commends Juleps, Decoctions that cool the hot *Viscera*, temper the Blood, and refresh the Spirits, the acid Liquors of Vegetables, or Minerals, and also purified Nitre, inasmuch as these check the heat of the Blood, and quench thirst.

But he is against giving hot Spirituous Waters, and Cordial and Bezoardick Powders (if the disease be without Malignity.) Yet if Nature endeavour a *Crisis* by Sweat, and Signs of Concoction appear in the Urine, then he allows of Sweating or gentle Purging. If all things grow worse, the Spirits must be recruited, only with Cordials, both Internal and External, of which in another place.

§. 16.

Syring judges very well, That the Cure of a Diary Fever is various, according to the Variety of its causes. When therefore this Disease is produced by Heat of the Air, a temperate Air must be sought, or at least it must be tempered, by Sprinkling Cold Water or Vinegar on the Floor, or by strowing the Room with cooling Plants; he prescribes also the following Julep for the Patient's Thirst.

Take of Water of Carduus *dictus* six Ounces, Sord Ounces, Syrrup of red one Drachm., Spirit of N Grains. Mix them.

But when the Fever arises Cold, coming upon the Heat of the Body, he, to purpose, mixes Volatil Harts-horn, or Sal Armon one Scruple, and gives it several times.

When an Ephemera is by strong Drinks, he thinks Cure should be performed with some Acid Drink, as the Julep prescribed, or the Tincture of Roses following; which he recommends in all Febrile heat.

Take of Water of Barly Ounces, red-Rose Flowers one Ounce, Olexum *ris per campanam*, which is sufficient for a grateful Infuse them in a Glass flopt, and in a warm place the Extraction of a Rose-ture. Add to the Collected Syrup of Jujubs three O Mix them.

If a Diary Fever come with much Labour or Motion of the body, the Animal Spirits must be Recruited with some Spirituous Drink: to this end he commends the following mixture, to be taken at some distance of time.

Take of Water of Linden Flowers, Betony, Fenel two Ounces, rectified Spirit Wine, or *Aqua vite Martis* one Ounce and an half, S

of Salt one Scruple, *Fu-*
rosatum one Ounce. Mix

When an *Ephmera* comes of
Anger, he prescribes the fol-
lowing Mixture, which corrects
that is both disturbed and

of Water of Plantain, Let-
tuce, Sorel each once Ounce,
Cinnamon half an Ounce, sweet
Spirit of Salt half a Scruple,
Syrup of *Diacodium* one drachm.
Mix them.

When a Diary Fever comes from
Grief, he commends a Mixture,
to mend the austere juice
in all great Grief, & which also
restores the Effervescence of
Blood in the Heart, that is
depressed and Febrile.

of Water of Penny-royal,
each two Drachms, *Spiri-*
us aromaticus half a Drachm,
Opium two
Scruples, of Sal Ammoniack
one Scruple, Syrup of
Malva one Drachm. Mix them.

When this Fever comes from
much Watching, then Sleep
must be gently procured, by giving
Milk, or a Grain or two of
Opium. Where there
is Plethora, you may Bleed
where you please, not till the
patient faint, but at several times;
when Bile abounds in the Body,
it will have it diminished by some
cholagogue, or altered by
Juleps, here and there describ-
ed. Also when the Mouth is bit-
ter, such things are good as gent-

ly carry off Bile by Stool.

As to the Cure of a Continual,
since there are several differences of
Continual Fevers, both as to Causes
and grievous Symptoms that attend
them, it is requisite that we recount
some together with the Method of
Cure, according to the judgment
of this worthy Author. There-
fore he Cures a Bilious Continual
by correcting the Saline Acrimo-
ny with temperate Acids, such as
Sweet Spirit of Salt, &c. 2. By
amending the inflammable Oleosi-
ty of the Bile by austere Acids,
Sempervive, Plantain, &c. 3. By di-
minishing the Bile with Chola-
gogues, but gentle ones and Sub-
acid, such as Cream of Tartar,
Salt of Tartar, *Tartarum Vitriola-*
tum; Receipts of which Remedies
you may meet with in authors, that
would tire me to recount, and so
you may find the Cure of all the
Symptoms sufficiently described
by the foresaid Author.

As for a Lymphatick Fever, and
other sorts, which he refers to Con-
tinual ones, we shall treat of them
in another Chapter hereafter, and
now we will turn our selves to our
own.

§. 17.

IN Our judgment the Cure of an
Ephmera, which is truly such,
is needless; for it admits not of
Cure, because it uses to cease of it
self by Sweat, and a Physician is
rarely called to the Cure of this,
unless among Rich Men. But since
it may easily Degenerate into ano-
ther Fever, especially a Putrid Con-
tinual, we ought to Cure it. And
in the mean time, lest this Fever
should return, one may Purge,

that the fault in the Mass of Blood may be removed, especially if Bile abound; for which end the gentle Cholagogue following, or some such like, will be proper.

Take of *Extractum Cholagogum* half a Scruple. Give it. If Phlegm offend, it may be sharpened with two Grains of Trochiscs of Alhandal, made into Pills.

But all Purges and Vomits are suspected by me, because they have not respect to the Fever, if there be no Cacoehymy; for the disturbed Mixtion of the Blood is not restored by Purgatives, but by Diaphoreticks. Therefore I think the Cure should be begun with giving a Clyster; and in a Simple Continual a little Blood must be taken away, and afterward gentle Antifebriles, that dispose the Body to a Sweat without any great disturbance of the Blood, must be given at times.

The good Women take only hot Wine with Mace, Nutmeg and Sugar. We add half a Drachm or a Drachm of Treacle, and we take Generous Wine; because that which is not so, will not cause Sweat. For the poorer sort, they may take half a Drachm of Crabs-eyes or a Scruple of Powder of Coral. *Be-zear* Stone, because it is hard to come by, ought not to be much prescribed. I should prefer the use of Harts-horn far before it. And here a Decoction of Barly with juice of Citron or Limon, or a Decoction of Harts-horn with Scorzonera will be proper. Always some Drops of Spirit of Nitre, or of *Tinctura Consortativa cardamomizata*, or Tincture of the greater Daizy, shar-

pened with Spirit of Vitriol or some other cooler, should be put in the Drink of Febrifuge Waters also answer ends, and Emulsions of the Seeds Juleps of a decoction made with shavings of Harts-horn and Tamarinds. Absorbents will be good, such as Terebinth Powders, *Antimonium Diaphoreticum*, divers external Emulsions for the Liver, Heart, and Womb. To Blood-letting here also we must act cautiously, it may be where there is a Plethora, and Suspicion of Malignity.

But in a Putrid Continual, an Humor endued with a Fermentative Quality is Peculiar, and gives a Periodical Continual, beginning, to wit, on the second Day, if you see any signs to be moved, Move, Purgative, Bleed. Among Purgatives the Laxative Infusions; also Emulsions given prudently do often remove grievous Symptoms. Women must have a mind to Sweat, but must first be loosened, lest the subtiler Parts of the Humors be separated and carried to the Habit of the Body, and so, over, by the Diaphoretick Medicines, whereby other Mischief is produced. In this case Clysters for a young Body are very proper, especially in the Beginning of the Disease; but in Old Men they are not so safe; nor must Clysters be given when the Crisis is near, or the Declension of the Disease. Whether one should Purge or bleed, the Physician may guess in some measure by the Appetite, which if it be decayed, it is usually a Sign the Stomach is laden with bad Humours, which ought first to be ge-

arged off. Among Alterers,
Mineral Spirits are reckoned;
Diaphoreticks the Mixture
of things, Spirit of Harts-
Spirit of Soot, and other
to be found in Practitioners,
In a Fever such things
never be given as obstruct,
In stead thereof we may use
Prunella, Spirit of Nitre,
Camphore, because these ob-
not: So also plentiful drink-
Fever does no hurt of it self,
does good, if it do not ob-
which it will not, if it be set
little on the Fire, yet so as
to be hot, but only that it
not be actually Cold; then a
Spirit of Nitre may be add-
ed so it will do no harm. The
Fever is often extended by cold
inasmuch as this obstructs its
and so Wind is kept in it, which
it. You may in this Fever
Camphore as an *Arcanum*, e-
specially if Watching, Pain, and
inconveniences accompany
which said things Camphore
if three or four Grains of
taken, because by its Subtilty
circulates without obstructi-
You must not presently
to Cordials, for if you do,
will greatly endanger the Fe-
ver. You must reckon the
of Narcoticks, they may be
about the Eleventh Day,
in the Declension of the
for Continual Fevers must
be dealt violently withal, nor
they be Cured by one Remedy,
which yet *Helmont* brags of)
surely. Wherefore we give
Diaphoreticks at times, as *Sylvius* does,
in form of a Mixture, or in

Take of Water of Fenil, Baum,
Roses once Ounce, Tincture of
Saffron one Drachm, *Bezoar-
dicum Minerale* half a Scruple
or a Scruple, Spirit of Salt twelve
Drops, Syrup of *Carduus Be-
nedictus* fix Drachms. Mix them.
In decay of Strength a Drachm
of *Confectio Hyacinthi* may be
added.

In the *Interim*, at some distance
of time, about twenty Grains
of *Lapis Prunellæ* with fix Grains
of *Bezoardicum Minerale* may be
given. And if the Patient Drink
much, add to every Draught Ten
or Twelve drops of Spirit of Ni-
tre, and so the Thirst will cease. All
Nitrous things are proper here, in-
asmuch as they Precipitate and cool,
adding Sudorificks and Camphore,
for so without doubt the Fever
will cease. The following Powder
has been experienced and seldom
fails.

Take of *Bezoardicum Minerale*,
China each half a Scruple
Camphore three Grains. Let,
the Patient Compose himself qui-
etly to Rest, and expect only
a small Sweat.

Oftentimes all the Blood is di-
sturbed in this Fever, and so turns
to Malignity, which alters the or-
dinary Method of Cure, especially
as to Purging and Bleeding, which
must then be let alone: In this case
also in the beginning of the Fever
the Pulse must be felt exactly; for
if it be frequent, I dare not give a
Cathartick; and if it be weak and
low, I suspect Diaphoreticks, espe-
cially strong ones; wherefore in

this case we must succour Nature by more moderate things, in the manner following:

Take of *Aqua Comfortativa Augustana* two Ounces, *Cornu Cervi citrata* one Ounce, Cinnamon Water half an Ounce, *Saccharum perlatum*, as much as will make it grateful. Mix them.

For comforting we commend Electuary of Pulp of Citron, with Conserve of Wood-forel, Currans, &c. adding some *Species Diamargariton, de Hyacintho* and Ivory not Burnt. Whey also of Goats

Milk may be boyled with Citron Peel, and *Clyffus Animumi*, mixed with Tincture of Violets, be dropt into it.

Timely care must be taken of Symptoms that attend these Fevers, such as looseness, Watching, Thirst, and other Accidents, troublesome both to the Spirit and Blood.

If, after the Fever is cured, the strength nevertheless remains weak, and the Weakness be extreme, may lay a lively lusty Youth, by the Patient, according to Sydenham, my very good friend, his Mind.

CHA

C H A P. III.

Other Putrid Continual Fevers, of a Causus or Burning Fever, of a Continual Quotidian, a Continual Tertian, and a Continual Quartan.

§. I.

In the preceding Chapter we treated of those Fevers that are commonly called *Putrid*, for that they Putrefy, and Wax hot like Hay. We now subnect their species, and first of all a *Causus* or a burning Fever, is a Continual Fever, arising from a great Perturbation of the Blood, constantly afflicting the Patient with a most violent Heat and unquenchable Thirst. This Fever differs in Degree from a *Putrid* species. But if the Exacerbations of Heat be observed to return at some Intervals of Hours or Days, the Fever assumes other Names, and according to the Variety of the Humor and Accession, is either called a *Quotidian*, which comes but seldom, or a *Continual Tertian*, which is more frequent, or a *Continual Quartan*, which is the most rare of all. They first of all divide a *Causus* into *Malign* and *Benign*. The difference may also be fetcht from the Causes, why one is more *Mild*, another more *Violent*, also why one is *Simple* another *Compound*; for one arises from disproportionate Particles disturbing the Blood, another has

many Particles intimately mixt together, from whence also other Symptoms are induced. They are distinguished into *Remitting* and *Intermitting*.

Remitting is when the Fever is less, but *Intermitting* is when it is quite gone, and after that returns again. In the Paroxysms of *Intermittents*, there are for the most part shaking Fits, whereby also they are distinguished from *Continuals*.

There is also a Bastard *Causus* or *Elodes*, in which the Sick Persons Sweat continually and excessively. That Fever also is called *Affodes* or *Fastidious*, when the Patient has a Nauseousness and Vomiting.

Part Affected.

The Part Affected according to the Ancients is that Noble *Viscus*, the Heart; but the Moderns think it to be the Mass of Blood, and the little Vessels of divers Parts.

§. 2. Diagnosticks.

THE Diagnosticks of a *Burning Fever* or a *Causus*, are taken from these two Marks (*viz.*) a great Heat, and an Extraordinary Thirst; as for the other Symptoms, they

they are the same in this Fever as in all others. A *Quotidian Continual* Fever is manifest of it self, so long as it is in the Increase or Waxeth worse and worse, otherwise we must be beholden to the general Signs of Continual Fevers; for the hotter the Predominating Particles are; or the sharper or more Bilious they are; or, as in the Sense of the famous *Willis*, they are either Sulphureo-Saline, or Salino-Sulphureous, the more they disturb the Mass of Blood, and by Consequence the Symptoms are greater, or lesser.

The Signs of a *Continual Tertian*, besides those mention'd before as relating to Continual Periodical Fevers, are their growing worse and worse every third Day. But in Continual *Quotidians* a violent and beating Pain doth often shake the Loins, Back and Joynts of the Patient.

The Diagnostick of a *Continual Quartan*, is its more severe and constant return every fourth Day; the Heat 'tis true, is but dull, but afterward grows fiercer, the Pulse in the beginning small and slow, then it becomes great and swifter without shaking; or any Stiffness or Cold.

§. 3. Cause.

THE Old Galenists divide a Burning Fever into *Legitimate*, & *Bastard*, in which the Symptoms are milder. The *Legitimate* Burning Fever, they say, springs from the Bilious Humor putrefying within the greater Vessels, bordering on the Heart. But the *Bastard Causus*, they say, is derived from Bile mixt with

Phlegm or with a Salt Phlegm putrefying in the same Vessels.

But a *Continual Quotidian*, they say, comes from a Pituitous Blood putrefying in the Veins; and therefore they unanimously agree it has its Increase every Day, and to prove it, in that young Children and Boys are often subject to this Fever, as also Old Men, and those that are Fat, given to ease and resting; but these Fevers, they say, are not so common, because Phlegm as they will have it, putrefieth more difficultly.

A *Continual Tertian*, they say, which every Third Day grows more troublesome, comes from a Crude indigested Bilious Blood, putrefying in the *Vena Cava*. To which the hot and dry Indisposition of the Liver remotely contributes, as well as a hot and dry Nourishment, Youth in middle Age, or too slender Diet, too violent Exercise, too much Watching, or the frequent return of a hot and dry Air.

But a *Continual Quartan*, they say, happens but seldom, and grows fiercer the fourth day, and is produced from a Melancholic Blood putrefying in the Branches of the *Vena Cava*, and of it Nature naturally produceth Melancholic Blood, and disposeth it to Putrefaction.

As for the Fever call'd *Affected*, a sort of a Burning Fever, they say it proceeds from some Violence committed on the Stomach by some sharp and Bilious Humor, that pricks or provokes its Origin or Tunicles.

But as for the *Eloides*, a Fever which is always accompanied with Continual Sweats, it proceeds, either from some great Putrefaction

the Humors, or certain Malignant that preys on the very substance of the Body.

§. 4.

Arælius, who makes sixty sorts of Fevers, and all from the same Inflammation, without appropriating to them any particular Seat, saith, They are affected of Sulphur, and Nitrogen, put into a Flame, or enkindled. Sometimes he calls a Fever a sort of Earth-quake, from its shaking symptom, some times again he calls it Mercury and Nitre, including the Cause and Remedy in the

§. 5.

Some layeth the fault of this Irregularity on the *Archæus* or *Lifes Chariotier*, who, on an accidental Cause or other, is provoked to this disorder; for he gives by many good reasons, That it is impossible for the Spirit or Humors to putrefy; the accidental Cause is in a manner like a Thorn, which puts the *Archæus* into some extravagant Motion; nay, sometimes the *Archæus* of its own Accord, upon some small mistake, grows wanton, and in a manner vicious. Now these Thorns (he speaks of) are nothing else but certain Acute Corrosive Salts, produced from Indigestion, and which contribute to the firing of the *Archæus*.

§. 6.

Willis divides a Putrid Synochal Fever into a

Symptomatical, and *Essential*, That is said to be *Symptomatical*, which takes its rise from some other Disease preexistent in the Body; so that the Fever is only a Symptom that attends the foregoing Disease, as the Fever which follows a Pleurisy, a Squinancy, a Wound, or Apostem in any chief Part; and as the Author saith, no Putrid Fever is altogether *Symptomatical*. For the Squinancy or Pleurisy are the Effects of a Fever, and not the Cause. In these Diseases he observes a certain disposition of the Blood to coagulate; and that from its Heaviness, or Sluggishness; as it is in Milk, when it begins to Sowre, for then it is not Boil'd without Coagulation: so in the Mass of Blood, there is a certain Sowreness, which naturally disposeth it to Coagulation; for every Extravasation, and Inflammation from thence, in a Pleurisy, Squinancy or Inflammation of the Lungs, doth not always come from the Abundance of Blood, or Fulness of the Vessels, but the Blood is often stopped in its Motion, and in a manner stands still, from whence follows a sharp Pain. Nay, the Blood sometimes stands still in the very Heart, whence your pleuritical Persons often complain of a great Heaviness or Weight about the Heart, and when our Author opened the Bodies of some that dy'd of these Diseases, he found in the Cavities of the Heart and Vessels about it, the Blood in certain Morfels or Pieces. He saith, That in a *Simple Synochus*, the more Subtile or more Spirituous Part of the Blood is inflamed.

But in *Putrid Fevers* arising from the Catching of Cold, he concludes

cludes, That the Evacuation being stopp'd and those *Effluvia* retained (which like Leaven puff up the Mass of Blood) the Blood becomes more turgid in its Vessels than ordinary, and since through the defect of Air or fanning, the Natural Circulation is too much streightened, the imprisoned Blood breaks out where ere it finds a passage through the Arteries, and being Extravasated begets a swelling or hardness, which causeth an extraordinary Heat and Pain; hence the motion of the Blood is more disturbed, and the Fever at first grows more troublesome.

A *Putrid Essential Synochus* he divides, first into a *Putrid*, then into a *Causus*, or *Burning Fever*, as also into a *Quotidian*, *Tertian* or *Quartan*.

The Nature or Essence of a *Causus*, or *Burning Fever* (which finisheth its Period or Natural Course with a greater Heat, and a most intolerable Thirst, and other Symptoms that argue a greater Inflammation of the Blood) in the Sense of our Author consists in this, That the Blood in this case is hotter, that is, more impregnated with a sort of Combustible Sulphur, and therefore when it waxes hot, the Inflammation is greater, and becomes more Universal through the Body; thence also its Motion is Acute, and soon arrives to its height, the Symptoms are more vehement, the *Crisis* more difficult, and the Event more dangerous. As to the Fits or Periods in which a *Putrid Fever* at a certain time sometimes encreaseth, and like an intermittent returns sometimes every day, sometimes every third day, or every fourth day,

our Author here proposeth his opinion, and presupposeth two principal things, which for the most part raise that Effervescency, or boiling up of the Blood. First, the Exaltation and Firing of the Sulphureous Part in the Blood. Secondly, a gathering together of that adult Matter that remains after that Firing, even to a Degree of Turgescentcy: From the first derives the Continuity of the Fever, from the other the height of the *Crisis* of it: and to these he adds a third (*viz.*) a Fulness and Turgescentcy of a Crude sort of Juice from Food lately taken, which Continual Fever causeth a great Effervescency.

In a *Putrid Fever* that is Acute, the whole Mass of the Blood, as he saith, is soon Enflamed, and in the greatest heat imaginable, whatsoever Nourishing Juice that is Consumed by the Fever, that little or nothing remains in the Mass of Blood, towards the next Fit. According then to the greater or lesser Inflammation of the Blood, and the Addition of Crude Juice, the Fever is either Stronger, or weaker. In every Fit he supposeth something of the adult Matter of the Blood, doth evaporate, leaving that Stock of degenerated Juice.

As to the return of the Fit, it is either daily, or every other day, that depends, in the sense of the Author, on the various disorder of the Blood; hence that *Succus Nutritivus* being generated, ariseth sooner or later to a Degree of Turgescentcy, and therefore by its Effervescency, produceth oftner, or seldomer Fits in this Fever.

§. 7.

Synochal distinguisheth the *Synochal* Fevers in respect of their cause, into *Bilious* or *Lymphatick*, and by *Lympha* doth not understand that Matter which form the Globular Glandules of the Heart, but also the Pancreatick Juice, and the very *Saliva*, Spittle proceeding from the Salivary Glandules, and moisture of the Intestines, and all other Humours that mix with the Blood in Circulation; and these Fevers divide into *Lymphatick*, *Glandular*, *Pancreatick* and *Salivary*. If Bile or Choler be chiefly the Cause of all Burning Fevers, especially a *Causus*, from the Glandulous Cause he derives all Fevers that are accompanied with the more violent Pains of the Head and Face, as from the Pancreatick Cause those that are accompanied with Pains of the Belly, from the Salivary or Spittle, those that are Accompanied with great Disturbance, Stretchings of the Stomach, and other parts. Where then the Heat is deeper, as in a *Causus*, the Pulse is fuller, the Urine thicker, and of deep Dye, the Thirst Intolerable, the Tongue dry, and Cleft, sometimes Black, he saith the Cause of Choler is Corrupted with a Lixivious Acrimony, or too Oily a Substance. But if the Fever hath also a gnawing Pain joyned with it, then he Ascribes it to the sharper or more Acid *Lympha* of all the Globular Glandules, or of most.

The Difference of these Fevers, is taken from the Vehemence of their Symptoms, and is reduced to

They are the *Causus* or *Burning Fever*, and the rest which invade the Patient with Inflammation, Burning and Redness.

As for those Melting Delirious Fevers, and the more Malignant ones, we shall Treat of them in their own order.

The Primary or Principal Cause of these *Synochal* Fevers, which torment the Sick with a continual and mighty Heat, is the Bile or Choler grown too Sharp or Oily, whence riseth not only a greater Effervescency in the right Ventricle of the Heart, but also in the lesser Intestine, the Pancreatick Juice not a little contributing thereto, especially being sowed with its Stagnation, & as it were producing a sort of a Fit. For he looks on the *Lympha* as the Primary cause of those Fevers, that make their assault with continual Cold, and shaking, but especially the Pancreatick Juice, when debauch'd with a certain Acid sharpness, which stirreth up those Acid Vapours from the *Tenu Intestinum* in order to a new Fit, and raiseth a wandering Chiliness through the whole Body.

§. 8.

M^y own Opinion is, that when there is any Obstruction in any Principal or publick Part, so as to cause an Inflammation, a Fever naturally follows, which if it constantly remains, is to be Stiled *Continual*, if it admits of any Truce, is to be called *Intermittent*. The Cause of a true Burning Fever, or *Causus*, is taken from a certain corrupt Humour, whose Pores are truly opposite to those

of the Blood, which Humor proceeds either from the Perspiration being Violated, ill Air, or excess of Strong Liquors; from which Causes there arises so great a Conflict, and dispute betwixt the Volatil and Oyly Salt, and Acid, with so great a Heat, and almost intolerable Thirst, that in this our Natural Kingdom, nothing but a certain Anarchy, and Confusion of the Animal Spirits remaineth for a while. Therefore a *Continual Intermittent Fever*, *Quotidian*, *Tertian*, or *Quartan* ariseth, when, from the solid Parts, some *Heterogeneous* Humor, Gross Salts, and nitro-sulphureous Particles invading the Mass of Blood, destroy its Symmetry; these ruder Particles, as I have said, which are either contained in the *Serum* or *Lympha*, Chyle, or Pancreatick Juice, or in the *Saliva* or Mass of Blood, are so jumbled together, that the whole Mass is put into such an Extravagant Fermentation, that it is a great while before it returns to its Peaceable and more Regular Motion: and so while this Offensive Humor, impregnated with these Particles, is communicated to the Blood, it is necessary a *Continual Fever* should follow. But when this Corrupt Humor, or Disproportion'd, or Anomalous Particles (whose Residence for the most part is in the Chyle) at certain set times, as it were by Surprise, invade the Purple Mass; then there ariseth an *Intermittent Fever*, and thus we include the Combat of the Acid depraved, with the Alcalick Particles.

And according to the Distinction, it is here to be observed, That a *Continual Tertian*, for the most

part, begins with Shaking, being the *Quotidian* not so; the *Quotidian* after the Fit, leaves behind it universal Pains, and so these Fevers to be distinguished from one another in the beginning.

A *Continual Quotidian* ariseth from the Crude, and indigested Particles in the Chyle from certain Wild Salts or fermenting Reliques, which about the Milky Vessels, or Glands of the Mesentery, are communicated to the Blood, and cause an Effervescency. Phlegm is not here to be blamed, since I have known many *Continual Quotidians*, which have arisen from Cholerick and Sulphureous Particles, which the Spirits that attend it, make good: and of this sort of Fevers often happens a reciprocal turn of a *Tertian* into a *Quartan*, or a *Quartan* into a *Tertian*, the same Symptoms remaining, shews they both are derived from the same Humor. In a *Continual Tertian*, the Effervescency of the Blood is greater, because there is a greater obstruction on the Vessels, and the Ferment therein contained is more abundant. In a *Quartan* the Effervescency is lesser and milder, because it proceeds from Colder, and more Sharp Particles.

There may be also *Quotidian*, *Sextans*, *Septans*, *Octans*, even *Nonans*, according to the greater or lesser Irregularity of the Blood: The Pains of the Head usually Occur in these Fevers, proceed from the Grosser Particles imprisoned betwixt the Brain and Membranes, which by their Acrimony or Sharpness, pulling and

the Nerves, cause those
As for the other Symptoms
in these Fevers, we shall un-
derstand them in our following Dis-
cussion.

§. 9. Prognostick.

THE Prognostick Signs shew
us, That all *Burning Fevers*
are dangerous, because the Fever
is continual and Acute. *Burning*
Fevers arrive at their *Crisis* the
fourteenth day, either by destroy-
ing or freeing the Patient; a weak
Crisis is but the sign of a doubt-
ful Event; for the Remoter it is
more natural, and usual stroke,
therefore more dangerous it is.

The *Autumnal Continual Fe-*
vers are more dangerous than the
others, for in these you must al-
ways Purge for fear of a Relapse,
and the other you must abstain; for
every Air supplies the defect of
the others. According to *Galen's*
Comment on *Aphor. 14.*)
this Disease proves Mortal to Old
Persons. If the Urine is thick and
without Sediment, it sheweth a
great disorder in the Blood, the
thicker and thinner the Urine is, so
much the worse.

When a *Continual Quotidian*
Fever is great and slow, 'tis not
without Danger, for it threatneth a
Sick.

And the *Continual Quartan*
Fever, tho it happens very seldom,
is dangerous enough and very
lasting, and at last from its
long Continuance generateth a
Scurvy.

§. 10. Dietetick Cure.

IN the most Acute Fevers, whose
Crisis is in the space of four days,
the most slender Diet is most ne-
cessary by reason of the Extream
Immediate Pains; and the great
Violence the Blood and Animal
Spirits are under. For Meat, altho
it contributes to Preservation, yet
it removes not the Cause of the Fe-
vers, according to that usual Maxim,
Impure Bodies, the more you Nour-
ish them, the more you Hurt
them. Hipp. 2. Aph. 10. There-
fore they are much out, who are
always loading the Patient with
Meat, since they only hasten their
Destruction; and let a Physician
prescribe what he will, or for-
bid what he will, nevertheless in
this they are Arbitrary, according
to the common saying: *They*
Live as they will, are Cured as
they please, and Dye as they
ought.

For the Stomach by reason of the
want of Animal Spirits, & great dis-
order that attends the Fever, grows
Infirm and Weak, and therefore
performs not well the Work of
Digestion, but rather by Crude
and Corrupt Matter affords Nou-
rishment to the Fever. Hence,
Hippocrates 7. Aph. 1. 15. *If any*
one gives Meat to one in a Fever,
what would be Nourishment to
him in Health, advanceth the
Distemper when he is Sick.
Therefore at the approach of a
Fever, we hold Abstinence migh-
ty necessary. *Hipp. 1. 3.* in his
Discourse of Diet saith, If a Fe-
ver assaults one that is Pletho-
rick, if you afford the Patient
nothing but Water for three days,
the

the third Day the Fever will go off, if not, you must use a Pti-fan, and the fourth or seventh Day the Fever will leave him, especially if he shall sweat. Therefore let those that are Sick of a Fever, abstain from Flesh, and let them rather take thin, cooling Broths; let their Drink be Small-Beer, Barly-water or Tamarind and Sorel Whey, or a Decoction of Harts-Horn with Sorel Roots; but in their usual Drink let there be put some Drops of the sublimated Spirit of Salt dulcified, or of Salt of Nitre: Juleps with the Dulcified Spirit of Nitre are very proper: and, as occasion serves, a little Wine and Water may be allowed.

A Cooler Air is here to be chosen, which if Nature denies, let Art some way or other supply, and to secure the due Perspiration of the Body, let the Patient be well Guarded with Light Cloths: A hot Sultry Air is bad, as also the Night Air. In these *Continual Fevers*, let them abstain at first from immoderate Sleep. Keep the Body open, and the Mind at ease; for all the Passions of the Mind are to be laid aside, especially Sadness and Anger; and great care is to be had as to all those things we call not Natural, for Care is to be taken that what Nature endeavours to cast off as an useless Burden, be not retained, unless there be an immoderate Evacuation (that Weakens the strength) which is to be hindred, and all Vehement Perturbations are to be avoided.

§. II. Pharmaceutick

THE *Old Galenic* ly in the beginning of vers, fly to Phlebotomy, as to a certain Refuge, because, as they say, doth not lessen the plenitude fullness of the Vessels, or diminisheth the strength, of the Patient, but it cools the whole Body, serveth a due Perspiration, keepeth off Putrefaction: The Ancients usually bled their Patients even to a degree of Fainting, the more prudent of them, the the Repetition of Phlebotomy several times more proper, as a Clyster before. The Galen also advise that the Patient be often till the most Corrupt Blood appeareth, and instead of bleeding a Vein they make use of Cupping Glasses and Scarifying, when the Patient is Weak, as in those *Intermittent Fevers*, or where the Patient admits not of the other way.

Their Pharmaceutick Remedies are either those that are Evacuating, or those that are Alterative, under Evacuating Medicines, comprehend all Emetics, Catharticks, and Diureticks: under Alteratives they include all Medicines that Cut, Cool, or Comfort. As to Purging Medicines, they are not to be given at the beginning, unless the thick sick Matter grows troublesome and bulky, by which the Fever increaseth, which is easily discovered by Nauseousness, Thirst, Heart Bitterness in the Mouth, or Pain of the Belly, and other Symptoms, in which respect sometimes a Purge is given before Bleeding, but the Purgers ought to be

milder sort, as *Cassia*, *Manna*,
Tamarind-Whey, *Dia-*
mond, *Syrup of Roses*, solutive
 which they compose certain
 which you may see a
 the Ancient Practitioners.
 if Nature endeavours to
 the Morbifick Matter the
 Way, which the Physician
 easily guesses from the Nause-
 and Vomiting, then they
 Vomits, for they say it hath
 happened, That by a Vomit in
 beginning, the Fever hath been
 which otherwise might
 long continued: but they
 in this Case the Milder
 Vomits; as for Example;
 Water luke-warm, with the
 of sweet Almonds, or the
 Decoction, with the
 of Dill or Rhadish, to the
 of a Pint, for under that
 they are apt to remain
 mach.

the whole Course of this Di-
 they Prescribe Glysters every
 specially if the Body be not
 which may be Compos'd of
 and Mollifiers.
 Bleeding, and the Clean-
 of the first or upper Passages,
 preparing Medicines or Dige-
 are advis'd, which both miti-
 the Heat, prevent Putrefacti-
 and open Obstructions; such
 Juleps, Cooling Broths, and
 tions. In Cholera or Bile that
 and Thin, they recom-
 Acids used in Juleps, in the
 or Advance of the Fever.
 Concoction or Digestion of
 Humors is Apparent, they
 up of a Decoction of *Aspa-*
 Roots, and Liquorice, the
 of Agrimony, and Pimper-

In lasting Fevers that rise from
 the more Stubborn Obstructions,
 they recommend a Decoction of
 Ground-Ivy, or Succory, or Cha-
 momil.

The Ancients also allow a large
 Draught of Cold Water in Putrid
 Fevers, in which the wiser part of
 them are very Cautious; yet in a
 mighty Burning Heat, they allow
 even a Pint of Cold Water, with
 some Drops of the Spirit of Vitriol.
 To recover Strength, they recom-
 mend several Cool Strengtheners,
 to which they add the Powder of
 Pearl, or Harts-horn, *Diamargari-*
tum Frigidum, *Diatris*, *San-*
talum, *Diarrhodon Abbatis*, Con-
 fection of Alkermes or Hyacinth;
 for the Forms of which I remit
 my Reader to the foregoing Pra-
 ctitioners. In the Turgescency
 of the Matter, and Declension of
 the Disease, they fly to stronger
 Purgers, as Rhubarb, Agarick, or
 Mechoacan; and if the Fever con-
 tinues, they repeat their Purges,
 adding Preparatives between, till
 at last the whole Mine or Seed of
 the Disease be Exterminated.

After Purging, if Nature seems
 to derive the Morbifick Matter,
 through the Ureters or passage of
 the Urine, they assist her with Di-
 ureticks, for which end they Pre-
 scribe Emulsions, and the Roots
 of Fenil and Parsly to be boyled
 in Broths: but if they observe
 Nature endeavouring to cast off
 the Enemy through the Pores of
 the Body, they propose moderate
 Sudorificks, as *Carduus* or Fumi-
 tory-water; for they say, to mo-
 derate the Feverish Heat of the
 Body, and to strengthen the Vitals
 or principal Faculties, 'tis necessa-
 ry the Pores of the Body be open.

and that the Filth be carried off that Way; to which end they outwardly apply certain Remedies, Epithems and Balsams to the Heart, and Liver, and other parts, which they either prescribe in the Height of the Fever, or in its Abatement, whilst the Heat diffuseth it self to the outward parts, not in the Beginning or Increase of the Disease, much less at the approach of the *Crisis*: In the Extraordinary Heat they apply several Coolers to the Feet, the Testicles and Hands.

§. 12.

THE *Paracelsists* in the Beginning of these Fevers, recommend a Vomit of Antimony, then they give *Laudanum Opiatum Paracelsi* from two Grains to three in Worm-wood-water; they commend also the Spirit of Salt Rectified to one or two Grains, in Suchory-water, & many other things, which you shall find afterwards.

§. 13.

HELMONT, with his Leader *Paracelsus*, brings many Reasons against the *Galenists*, as to Bleeding, which, they contend ought in these Fevers to be omitted; for *Helmont* Glories that he hath cured many Fevers without Bleeding, granting the Patient Wine also; nay, he saith more, that he who cureth not a Fever within four Days, is unworthy of the Name of a Physician, and the Remedy here made use of is a Sudorifick, (*viz.*) Diaphoretick Mercury, which cutteth, resolveth, and carrieth off the occasional Cause thereof wheresoever it be, and this it performs sometimes without

Sweat. The other Remedies we said before, were composed of Cephalicks, Marjoram, and Rosemary, which are not Alkalies, Volatil's, containing the Composition of Simples; these are moderate Diureticks, which in Intermittent Fevers, are to be given before the Fit; in Continual Fevers at any other time. For *Helmont* in the Cure of Fevers, doth not only regard the Occasional Cause, but the Excellencies and Disturbances of the *Archæus*, which being affected, the Fever ceaseth, the leaveth to the Work of Nature, which Generally Speaking, is its own Preserver: He allows a little Beer, mixt with a little Wine and Bread for Humectation or softening, but as for Rich Peas Golden Cordials, he rejects them as not agreeable to our Spirit. *Helmont's* chief Intention in curing Fevers is by Sweat, for the *Archæus* with its own Passion is inflamed, and produceth a hot Sweat, and so hints to the Physician, in what way the Fever is to be cured (*viz.*) by Diaphoreticks.

§ 14.

WHILLES in the Cure of Putrid Fevers hath three General Intentions; First, That the Blood be cleared from that Superfluous Inflammation it laboureth under; Secondly, That the Blood being inflamed, may burn out without less danger; Thirdly, That the Inflammation being over, the Blood be restored to its Natural Temperature. Fourthly, That a speedy Cure be taken of the Symptoms.

At the first Seizing of this

the whole Business con-
 in suppressing the Fever, or
 the Inflammation of the
 to which end he adviseth
 ; for thus the Blood is
 ; and the more troublesome
 are Dissipated, as you see in
 that is like to take Fire, if it be
 to the Air it is preserved.
 which also that the first Re-
 be Cleaned: and for this end
 recommends Glysters, sometimes
 and the milder sort of
 , which being seasonably
 , remove the Fever
 . If notwithstanding all
 the Fever perseveres, Care
 be taken that the Desflagra-
 the Residuous Sulphureous
 be performed with as little
 as may be. When the A-
 according to this Author,
 , with a strong Pulse,
 with Watchfulness,
 , or Head-achs, Bleeding
 is proper, that a free Tran-
 may be maintained; Gly-
 in this Case are safely gi-
 laying aside Purgers, or
 , rather use Opiates
 , which may appease
 , and fix the Spirits:
 at end this Author Com-
 Juleps and Decoctions or
 which cool the Burning En-
 things that temper the Blood,
 comfort the Spirits, are to be
 often: but for your Hot-
 or Spirits, Bezoardick and
 Powders, where there's no
 in the Fever, they are to
 as extremely dangerous.
 Fever is come to its Height,
 gently for the *Crisis*, suf-
 all things in the mean
 , neither Bleeding nor Purg-
 After the heat of the Fever

is a little over, and the Signs of
 Concoction appear in the Urine,
 and that Nature is yet but slow
 in its *Crisis*, then you are to pro-
 mote by some gentle Purge or Su-
 dorifick: but if all things are yet
 Crude, and without Sediment, there
 is decay of Strength; and Purging
 or Sweating is not to be allowed
 of without danger of Life. But
 in this case Nature is to be sup-
 ported with moderate Cordials, the
 Extravagant Effervescency of the
 Blood is to be prevented, and a due
 Fermentation preserved, which is
 best done with Powder of Coral
 and Pearl.

As for the Symptoms, especial-
 ly the most Violent, he hath very
 fit and appropriated Medicines,
 which the Courteous Reader may
 meet with in his Treatise of Fevers;
 he may Consult also the Writings
 of other Practitioners, especially
*Johnston's Syntagma Practi-
 cum.*

§. 15.

Spiritus in these Putrid Fevers al-
 lows of Bleeding in the Be-
 ginning, yet chiefly when the
 Burning is most; but when there
 appeareth any Sign of a trouble-
 some Acids, he adviseth Sudori-
 ficks, especially the pleasanter A-
 romaticks and Volatil Salts; and
 when the Bile or Choler grows
 troublesome, he orders Purging
 or Vomiting, and in a seasonable
 time he adviseth some De oppilati-
 ves, which may open the Obstru-
 ctions in the passage of the *Pancre-
 as*, and correct its Juice, which sort
 of Prescriptions you may meet
 with every where.

§. 16.

BUT ~~we~~ advise, in these Putrid Fevers, to do what is to be done speedily, Purging, and Bleeding the first or second day; but when Malignant Symptoms appear at first, as they often do, for Reputations sake, you must be very Cautious. Amongst Purgers, your Infusions are excellent; also Vomits may be safely given in the Beginning, which often prevent worse Symptoms: But in foster and more delicate Constitutions Glysters, in the Beginning, of Mollifying and Febrifuge Ingredients are more safe; in Old Men, as also at the approach of the *Crisis*, and in the Declining of the Disease, they are not so proper.

When therefore the Physician is called at the Beginning of the Disease, if the Patient be not Weak, let him first Bleed, then gently purge, and immediately after that, administer some powerful Sudorifick, and thus the Physician will hardly ever miss his Aim.

If there be a Sharpness or Acrimony joyned with the Fever, you may however safely Bleed, and after Bleeding give some Sudorifick; but if the Patient grows Weak after Bleeding, administer a Cordial, and then let him Sweat two or three Hours; tho' that immediately Fly to the use of Cordials, bring the Patient in great danger of his Life For the Cleansing of the first Region (which whether it be convenient or no, you may guess by Nauseousness and Vomiting,) the following Infusion will be very proper.

Take of the Leaves of *Senna* Drachms, Seeds of *Fenil*, *ler Montan.* of each Drachm, Small-Beer four Ounces, let them stand Night, and strain them in Morning for a Dose. Or,

Take of an Infusion of *Rhubarb* two Drachms and a half, sufficient Quantity of *Succory* Dandelion-water. Or,

Take of the Tamarind *Cla Myns.* three Ounces. Or,

Take Smallage-root one Ounce, marinds an Ounce and a half, boyl them in a sufficient Quantity of Fountain-water, towards the end, of the *Senna* half a Drachm, of Bastard Lovage one Drachm. In Twenty Ounces of the lature dissolve of the *Succory* with *Rhubarb* Ounces. Mix it, and at once give to the Patient from four Ounces. Or, you give the Extract call'd *Dithamum*, or *Diacitron*, Nature of the Patient will it.

And at the Beginning a Vomitive Antimony may be given with the Emetick Syrup of *Drachms*, or white Vitriol *Drachm*, or Emetick Tartar *Drachm*, or three Grains, *Crocus Martini* Absynthiated two Grains. Prescriptions as these you frequently meet amongst the Physicall Authors: All acid Minerals are of the Family of Acrids. Sudorificks are the safest Medicaments; amongst which *De Michael's* Bezoardick Tincture is excellent, as also *Mixtura de*

Spirit of Harts-horn, Soot, all Volatil Salts. But let the Physician take care he mistakes a Burning Fever, for a Malignant one, or a Malignant one for a Burning one; therefore in the former we may give Milder Remedies as we do in other Fevers; but in the Malignant Fever in the Beginning it is often like a *Causus* or Burning Fever. Therefore care must be taken to know, whether it be Malignant, which we usually guess it to be, if they are sometimes very common, and especially if the Patient complains of Stomach, of Heart, and weak-ness, and other severe Symptoms. There is no certain sign of Malignant to be learnt from the Urine, or from the Pulse, therefore the two are to be considered all together or Conjunctly. To oblige the younger Practitioners I will here Sodorifick prescripti-

of the Magistery of Harts-horn, the Back-bone of Vipers each one Scruple, *Bezoard* half a Scruple. Mix them, and divide them into two equal parts, for two several Doses. Take of the Spirit of Harts-horn, of *Antimonium Diaphoreticum* of each one Scruple, Salt of Vipers six Grains, divide it into two equal parts, for two several Doses.

For a *Causus* or Burning Fever, it will be very profitable Diaphoretic Powders not too hot, of *Antimonium Diaphoreticum*, *Bezoard Mineral*, of Gold, Silver, or prepared Pearls or Crabs-eyes, *Prunella*, or Tartar Vitriola-

ted with the Addition of a little Camphore.

The Alteratives that are particularly, or more specifically convenient in a *Causus*, are Whey, or the Distilled Water of Whey, *Nitrum Tabulatum*, *Tinctura Corroboreans Cardamomifata*, Tincture of Daizies, Violets or Roses, of which some Drops are always to be put in their usual Drink to remove Wind, and Obstructions. To comfort the Pores and other Vessels, those Alteratives that are partly Cordial, are proper; as the usual Cordial Waters, Confection of Hyacinth, *Sal Perlatum*, *Corallizatum*, and the like.

In this Case also outward Medicines are to be applyed sometimes to the Liver, sometimes to the Back; as the Cooling Oynment of *Galen*, *Unguentum Rosaceum Mesues*.

In a Continual Quotidian Fever instead of a Digestive, there is nothing comparable to the *Facula* of the Root of *Arum*, the Stomachical Powder of *Birchman*. For Purges, *Pill. Panchymagog.* and *Phlegmagog.* are best.

For the removing Obstructions and to correct, and throw out the ruder Salts, the Febrifuge Salt of *Mynsicht*, and the Flowers of *Sal Ammoniac* are very proper, likewise my own Febrifuge Tincture, which you have in the following Composition.

Take of *Extract Theriacal*, Wormwood, the lesser Centaury, Gentian of each a Drachm, Jesuits Bark half an Ounce, to which add the Volatil Spirit of *Sal Ammoniac* a sufficient Quantity. The Dose is from twenty Drops to forty. Or,

D d d 3

Take

Take of the Febrifuge Elixir half an Ounce, the Dose is forty Drops. Or,

Take of Vitriolated Tartar two Scruples, Salt of Worm-wood, Centaury, Mineral Gold of each a Scruple, divide it into four equal parts.

The Essence of Worm-wood, and the Febrifuge Elixir in respect they are good against a Cachexy or ill Habit of Body, ought to be taken every Day, and in this Sence also *Vinum Absinthitum*, *Chamedritum*, &c. are very good, or the Essence of Worm-wood dropp'd in the Patients usual Drink. So also the Spirit of Vitriol, of Copper, *Penotus's* sweet opening Spirit of Salt, may be dropped into Beer to give it a pleasant tast. If the Patient be subject to Swooning give the Tincture of Coral, with the Cordial-Water of a Stag's Heart of *Mynsicht*, &c.

In a *Continual Tertian* in your Alteratives add always some Acid, as the Spirits above-named, that they may pierce the deeper, and take away Thirst: but here you are to observe, That the Spirit of Nitre is not to be mingled with the Spirit of Salt, because they will raise a Fermentation. The double Secret of *Myns.* is very good also. In this Fever I have likewise a particular Preparation of Tin. Camphore in this Case is very useful.

Take of the Stomachical Specifick of *Poterius* a Scruple, Harts-horn prepared without Fire, prepar'd Ivory of each half a Drachm, Camphore two Grains.

Divide them into two equal parts.

Diureticks are also profitable. The Tincture of the Flowers of *St. Johns-Wort*, Blew-bottle *Calcatrippa* may be given to a Drachm, the compound Spirit of Salt to fifty Drops at a Dose.

Take of *Bezoard. Mineral.* half a Scruple, Water of *Carduus benedictus* three Ounces, Symplic *Carduus benedictus* three Drachms. Mix them. If the Patient be Weak,

Take of *Aq. Confortat.* an Ounce and a half, Saffron and Camphore of each three Grains, Spirit of Salt six drops, Symplic of the juice of Citron three Drachms. Mix it for one Dose.

In a *Continual Quartan* may be obtain from Bleeding. The Purgers that are most proper, are *Extract. Melanagog.* The Tasteless Pills of *Quercetan*, or of Gum *Amomiack*, an Infusion of *Fumitory*, Oxymel, and Purging *Elebor.* *Sudorificks*, *Fumitory*, *Carduus benedictus*, *Guajacum*-wood, and *Sassafras* are most convenient. Water or Spirit of *Sal Armoniac* or also the Flowers of it, and Preparations of Steel are very profitable; and amongst these particularly the Cachectick Powder of *Quercetan*, my Febrifuge Tincture. These are Prescriptions.

Take of the Cachectick Powder of *Quercetan* three Drachms, Confection of *Alkermes* one Drachm. Mix them. Take of *canum Tartarif.* leas'd *Elixir* of each a Drachm. The Dose

thirty, or forty drops.

It also is to be had of the symptoms that attend these Fevers, as Looseness, Watchings, and other things that vex the Animal Spirits, which I shall set of below. It very often happens that notwithstanding the Fever is gone, the strength of the Patient is so worn out, that there is a great Weakness, in which Case Sydenham doth with reason advise the applying a

young Youth to the Patients Belly, and by his own Experience Witnesseth, that many have recovered their Strength by that means. As for the rest it may easily be Collected from what either hath, or may be mentioned hereafter. Preserve the Strength by inward Medicines, but above all, the following Mixtures are very proper.

Take the usual Pearl-Waters, &c. and other temperate Cordial Powders.

D d d 4

CHAP.

C H A P. IV.

Of the Slow Heſtick Fever, the Colliquative Melting, and the Lymphatick or Catarrhous ver.

§. I.

AS for the Fevers, in reſpect they are derived from one Cauſe, I ſhall Treat of them in the ſame Chapter, excluding hence all Subtil and Scholaſtick Diſtinctions, which the Praſtical Phyſician hath no uſe of.

Paracelfus calleth the *Heſtick* Fever *Targam* and *Aridura*; And it is commonly deſcribed to be, A Continual Diſeaſe, that takes its Riſe from the Fermentation of the Blood depraved, affaulting the Patient with a ſmall quick Pulſe, and ſharp Heat, eſpecially after Meals, not without a Maniſt Conſumption of the Body. The *Heſtick* Fever, that is Habitual, is for the moſt part Continual, and yet admits of the ſame ſort of Fits after Meals, with a moderate, but Extraordinary ſharp Heat, ſometimes with a previous ſhaking, but oftner without it, by which the whole Body grows mighty Lean, and is very much conſumed.

This Fever, according to Phyſicians, hath three Degrees: In the firſt Degree there is a ſmall Alteration, with a Conſumption of the Body, which is hardly perceived, ei-

ther by Patient or Phyſician; ſo oftentimes the true Sealon of ring is loſt.

In the ſecond Degree, the Conſumption of the Body is more manifeſt, with a greater Heat, eſpecially an Hour or two after Meals, which ſhews it ſelf chiefly in the Cheeks, and Palms of the Hands.

In the third Degree, the Body ſo Extenuated, that the Hippocratic Face appears, and the Bones are hardly covered with ſkin, with an Oyly Urine, Faint Sweat at Night, Continual, or, as they call it, Habitual Heat. Which Degree of a *Heſtick* is that which is called a *Marſmodes*, or *Tubes*.

The *Colliquative* or *Melting* Fever is alſo reſerr'd to the ſecond Degree of a *Continual* Fever, in which the Body is extreemly Extenuated, and Lean, ſo that in a ſhort time nothing but Skin and Bones appear. Of this ſort alſo is that Fever which is called a *Sweating* Fever, becauſe the Body doth conſtantly and exceſſively Sweat; ſo that it is in manner dryed up and extraordinarily Weak. A *Heſtick* Fever is ſo divided into a *Primary* *Heſtick*, which diſcovers it ſelf from the beginning; and a *Secondary* one, which ſucceeds other Fevers; alſo into a *Slow*

ary and Simple Hectick; or it is mixed with a Putrid Fever, and so is complicated: Again the difference is in respect of the Place, the Subject, and the Cause; and in general it comes from the Consumption, Corruption or Inflammation of this or that part, or from that Disease.

2. Part affected.

THE Ancients placed this Fever in the Solid parts, some placing the Heart its first and adequate Subject, or rather the Solid parts of the Heart, which parts are dry; and are more, or less Irrigated, according to a good or bad Circulation, and so consequently the Body is well, or ill Nourished. The Solid parts are said to be the Subject of this Fever, in respect of the effects of it, (*viz.*) Consumption and Leanness more evidently seen in those Solid, and Fleishy parts; when in the mean time the Temper lyeth hid in the Mass of Blood, the Serum thereof being continually wasted, and Communicating a certain Acrimony to the Solid Mass, whence it acquires a putrid and Fermentative Intemperance: thence cometh the Hectick Fever, tho *Helmont* maketh the Stomach the seat of this Disease, as well as of many others.

3. Diagnostick.

THE Signs are expressed before, for the more usual are (*viz.*) a quick, frequent Pulse, every day lesser, a watchful Sleep, a Drowziness, a Pain in the Head and through the whole Body, a slow Fever, and violent Heat

in all the parts, the Eyes of the Patient are heavy, and he is extremely Thirsty, with a dry, small Cough; he is also Drowzy, and often Morose: The Urine for the most part is as it should be, but in length of time it hath a certain Oyl swimming on the Top, which is not the Fatness of the Solid Parts, as some think, but certain Oily Particles inherent in the Mass of Blood, and with the Serum, according to the rule of Circulation, transmitted to the Urinary Vessels. As for Appetite and Sleep, those that are Sick of this Disease, have them indifferently well, they Spit not much, nor is their Cough very moist, and they daily grow Leaner and Leaner, and after Eating are always Feverish, & Red in the Cheeks. They are for the most part troubled mightily with Night-Sweats, which dissolves their Spirits, and melteth away their strength; whence ensueth Naturally a wearing away of the whole Body, with a wonderful pale lean Face.

The Pathognomick Signs are these three following. First, That the Disease is constant, and so by Consequence continually preying upon the Vitals.

Secondly, That the Body, and more especially the solid parts thereof are Consumed.

Thirdly, That an hour or two after Eating, the Feverish Heat encreaseth even to a Degree of a Fit: the pain of the Head and burning proceed from Obstructions, and either because, by the Excessive Heat of the Fever, the blood grows sharper, or that an Inflammation ariseth perhaps in some ignoble Part, when Fevers are not well Cured, which Inflammation being suppura-

rated, and mixing with the Blood, sowres the whole Mass. Sometimes after an imperfect Cure, or perhaps the use of Cold Medicines, the strength of the Patient is wholly decayed. After Eating the Fever increaseth, because of Fresh and New Matter being Communicated to the Blood in the Nature of Chyle.

§. 14.

AND now we have Treated a little of the Signs or Symptoms of this Disease, it is necessary we say something of its Causes, which before we proceed any further, to go Methodically to Work, we shall propose according to the Sentiments of the *Galenists*, who divide them into *Next* and *Immediate*, or *Remote* and *Mediate*.

To the Outward Cause they refer all those things, which are apt to raise other Fevers; such as are the Heat of the Sun or Fire, too much and too violent Motion, Excessive Watchings, Grief and other Passions of the Mind; also Extraordinary Evacuations; as a Loosness, Dysentery, or Bloody-Flux, *Cholera*, Spitting of Blood, &c. and lastly, Hunger or want of Food in dry Bodies, or Sharp, Hot and Putrid Meats and Drinks, and many other such things, which, (as they say) destroy and devour the Radical Moisture.

The Inward and Nearer Causes, are the Inflammation of the Entrails, Burning, Pestilential, and long Fevers, Ulcers in all the *Viscera* proceeding from the Venereal Distemper, or from the Scurvy, all which are sufficient to cause a slow, & Hectick Fever, So *Galen* saith he saw

a Hectick which took its Rise from the Inflammation of the *Sepes Transversum*, & no less do the Modern Practitioners ascribe the Cause of an Hectick to the Corruption of the Liver, for they say there is a certain Filth that is sometimes Generated in the Liver, which corrupts even the substance of it, and Transmits its Filth by Circulation on to the Heart, in a manner set on Fire.

Sometimes they ascribe an Hectick Fever, only to Obstruction in this or that Intestine, which hinder the passage of the Chyle, and prevent the due separation of Humours.

§. 5.

THE *Chymists* hold that the Fever proceeds from the Sulphureous Spirits, being Enkindled in the Heart, which, as their Master saith, is over in Months time.

§. 6.

HENRIOT saith, that in a continual constant Hectick the Spirits are diverted from the Office of Digestion, so that what is but in a manner half Digested, becomes Corrupted. He is satisfied also, that the Consumption comes from the Obstruction, and Corruption of the Innate strength, as also from a sharp Filth; which he hath observed in a Seditary Life.

§. 7.

WHIS doth not derive this Fever from any obstructions in the Liver, Spleen, or Mesentery, that may hinder Digestion, but rather from an ill Condition of the Blood, which being grown too sharp or sowre, is prejudicial to Nourishment, and a Hindrance to Circulation. For he supposeth the Blood in the Heart, like Oyl in the Lamp; which if it abound with too Salt Particles, it Burns softly nor pleasantly, but wastes and wafts away strangely, leaving but a Weak and Faint Light. The famous Author opened one Dyed of this Disease, and found all his Entrails and other Viscera very sound, except the Lungs, which were grown dry, and filled with a Sandy Matter, not unlike Chalk. So also in this Disease the Mesentery or its Glandules are filled up with a Clayish sort of Matter; Now whether the Blood carries thus Salt through the Vessels being obstructed, and admitting only the Watry Part of the Chyle to pass thorow them, whether they are Prejudiced by the passage of a Salt Blood, our Author doubts, and is probably swayed they equally offend one or the other. Therefore if this Disorder proceeds from an Ulcer or Inflammation in any Part whatsoever, the Fever is the necessary Concomitant, thence he derives a Continual Fever, and Depravation of the Nourishment.

§. 8.

SCHADIVUS hath often observed these Hectick Fevers only to rise from excessive, or violent Exercise of the Body; or, that they may proceed from Extraordinary Anger, Sadness, or immoderate Grief (as D. Schadius observ'd in a certain Woman, who from extraordinary Grief for the Loss of her Husband fell into an Hectick) none doubteth. Our Author deriveth this Disease also from immoderate Watching, as also from long Fasting, or from Meats of small, and bad Nourishment, and with many Reasons condemns the Saliva or Spittle. He observeth also that this Disease, as also the more Stubborn *Quotidian*, *Continual*, and *Intermittent* Fevers, have other Symptoms attending them, as generally the Inflammation of the Entrails, and chiefly of the Lungs, and thereupon Ulcers and Apostems: He Condemns not the Liquor of the Glandules or Pancreatick Juice, so much for being sharp, or sowre, as for being clammy, by which the Bile or Choler becomes more Sluggish, and the *Lympha* more Dull.

He looks upon the Excessive Clamminess, or Viscosity of the Humours in General, and particularly of the Blood it self, as the true cause of wasting away in an Hectick Fever; for by that the Nourishment of the Parts is by little and little Destroyed.

As for the Cause of a Fit after Eating, he ascribes it to the *Saliva* being too Glutinous, whence the Chyle passing sooner to the Intestines, and meeting with the Bile

or

or Choler in its way, takes a Tincture of it, which is Communicated to the *Saliva*, and ſo by Circulation to the Heart; from whence a Pulſe quicker than ordinary is raiſed, as alſo ſome Redneſs in the Face, and a gentle Heat in the Skin, which according to the Conſtitution of the parts produceth other Symptoms in other places.

But when the Heſtick proceeds from an immoderate Motion of the Body, in this Caſe he thinks, that not only the animal Spirits, but that the *Serum* of the Blood is Exhausted, and thence it is, he ſaith, that all the Humors become ſharp.

As oft as the Heſtick comes from Grief, he Aſcribes the Cauſe to the Pancreatick Juice, which being ſowred, renders the other Humors more Clammy and Sluggiſh.

The cauſe of an Heſtick from Exceſſive Watching, he derives from the Conſumption of the Animal Spirits, and the cloſer crowding of them together, as alſo the ſharpneſs and Tenacity of the Humors.

When the Heſtick comes from long Fasting, he ſaith there followeth a General ſharpneſs of the Humors through Defect of proper Nouriſhment, which in Concluſion, produceth Sluggiſh and Clammy Humors.

When a Heſtick ſucceeds a *Quotidian*, then he concludes ſome Errors have been committed as to Diet.

When it ſucceeds a *Synochus*, he aſcribes it partly to the Acrimony or ſharpneſs of Choler or Biſe, and partly to the exceſſive uſe of ſuch Medicines, which even corrupt

and thicken the other Humors in the Body.

When Intermittent Fevers in an Heſtick, they breed Peculiar Humors more or leſs.

When a Heſtick ſucceeds an Inflammation or Apoſtem of Nobler Parts, eſpecially of the Lungs, it comes from a Filthy Corruption, which hath invaded the whole Maſs of Blood, as alſo a depravation of Nouriſhment, where all Parts in General are rendered unfit for their Natural Functions.

§. 9.

W^E confeſs with *Sylveſter* That the Cauſes of Heſtick Fever are Various, and manifold; for whether, as he ſaith, the *Saliva*, Nouriſhment, or any of the Non-natural things may immediately produce ſuch a Fever, I have much doubt; neither is the Pancreatick Juice, the glandules, or any of the Humors any otherwiſe Prejudicial than as they infect the Maſs of Blood, inducing a Cacochymia, or ill Habit of Body, and ſo, as it makes way for the Inflammation and Suppuration of this or that more or leſs Noble Entrail, and they cannot immediately produce a Heſtick Fever; but rather it is to be believed, That the Humors, whether the Pancreatick Juice, the *Lymph*, or ſome other, as they paſs through the ſuppurated Bowels, contract a certain ſharpneſs, and thus diſorder the Maſs of Blood, whence a Heſtick may proceed. For it is certain that in this Diſeaſe the Blood becomes ſharper than ſhould be, from thoſe Cauſes ſometimes from a certain ſharp

Mattered, which Incorporates
 with the Blood and other Hu-
 mors in its Circulation, whence
 it takes the Name of an HeCtick or
 Putrid Fever, because the Cause
 is in a manner Fixt in the
 parts. This Fever may Spring
 from the Discales of the Head. Thus
 I opened a Boy of Fif-
 teen Years, and a Girl of Nine,
 who I found I could not ascribe the
 Cause of the HeCtick or the Death
 of these Children, to any thing but
 an Apopleum, radicated in the Sub-
 stance of the Brain. In like man-
 ner we have seen many HeCtical af-
 fect Pleurisy, as Sydenham has ob-
 served in these Words. "Some-
 times after a great Inflammation,
 and Omission of Bleeding in the
 beginning of the Discale, there
 grows an Apopleum, from Cor-
 ruption gathered in the Hollow-
 ness of the Breast, in which Case ei-
 ther the Fever altogether ceaseth,
 or it kals becomes milder, and yet
 the Patient not out of danger,
 after an Ulcer in the Lungs
 and HeCtick Fever, the poor
 Patient dyeth of a Consumption.
 Sometimes also it succeeds a
 Pleurisy of the Breast, and Abdo-
 men, as also any Weakness, or In-
 flammation of the Stomach, the In-
 testines, Liver, Spleen or Mese-
 ntery, or any other Part, containing
 Pus; for a HeCtick usually
 breeds inveterate Ulcers, *Fistula's*,
 and such like Distempers of those
 parts; as after a *Fistula ani*, a
 Citizen got a sad HeCtick,
 and dyed of it: for when the Hu-
 mors, by way of Circulation, pass
 through these affected Parts, they
 contract some New Infection, by
 which they create a great Distur-
 bance in the Mass of Blood, Super-

inducing a sharp Indisposition: so
 that every HeCtick Fever is in a
 manner Symptomatical. For if,
 Corruption from exulcerated Lungs
 or any other Part that is wounded,
 passeth through the Lymphatick
 Vessels to the Heart, and causeth a
 HeCtick, why may not a Purulent
 Humor lying in any other inward
 or less Noble part produce the
 same?

The ProcatarCtick causes herein
 concerned, are bad Air, Nourish-
 ment too Spirituous and sharp, pro-
 ducing Gross, Clammy, and sharp
 Humours, amongst which Sugar is
 very bad, for it is so far from true
 Sweetness, that it is able to dissolve
 Brass it self; nay, the Portugueses
 know how to Destil of the Reeds
 thereof a Spirit that is perfectly
 Cooling, Biting the Tongue, and
 Corrosive, even to the Consuming
 of Metals, Bitter and of a Nitrous
 Taste. But I am weary of Repea-
 ting these things that are so well
 known, and therefore shall hasten
 on to my intended Discourse. Ex-
 cessive Watchings, unseasona-
 ble Studies, immoderate Sleep or
 Motion; the sadder Passions of the
 Mind, Grief, Anxiety, Sadness or
 Care, Envy, Anger or Hatred, play
 their parts here also; and for Ex-
 cessive Evacuations, 'tis well known
 how prejudicial they are.

That Consuming away in a He-
 ctick Fever, in my judgment, may
 proceed from the obstruction of
 the *Vasa Lactea*, or Milky Vessels
 in the Mesentery; for then the Blood
 flows, because it increaseth not,
 and because the Watery parts of it
 fly away; for when the Watery
 Fountain in the Blood is lost,
 which may happen many ways,
 the Blood Contracts a sharp Fer-
 menting

ing Indisposition, from the tart and corrupted Chyle mixing with it; hence it grows so sharp, that it becomes unfit for Nourishment, and even in a manner devours the Flesh from the Body, leaving scarce any thing but Bones. Sometimes it falls out, That the Capillary Arterious Vessels are obstructed, so that the Blood cannot pass through them; whence the Humours by standing still fowre, and wear out the Body; in these Cases there is not always a Fever; but if in any Ignoble part there happens to be a Suppuration, so that any Corruption be Communicated to the Blood, by changing the Texture thereof, it causeth a Fever, and by sharpening or fowring of the Blood, addeth a Consumption or *Tubes*.

Heat also two or three Hours after Eating increaseth in the Body, because of the mixture of the Vicious Chyle with the Blood, which brings such a Matter of the first Element as cannot be carried thorow the Pores of the Purulent Blood, which also is not duly mixt in the right Ventricle of the Heart, and so makes other Pores in the rest of the Blood.

The quick, and frequent Pulse in this case doth not proceed, as some think, from any Clamminess, for that would perhaps produce the contrary, but rather from a disorder of the Animal Spirits upon the Fibres of the Heart, and Arteries, and from obstruction of the Entrails; for when they are obstructed, a thin Matter passing through the narrower Pores, forceth the Blood upwards; and hence the Pulse is Weak, and Quick. We have known also a Heetick Fever: to be occasioned from

the unseasonable use of the Pain of the Head and Heat or Burning thereof proceeding from Obstruction, and from Blood grown sharp with the Heat of the Fever, or from Inflammation perhaps in some noble Part when the Fever is well Cured, which Inflammation being suppurated and mixed with the Blood, createth a sharp there, and so produceth a Cick.

The Blood also may be sharpened by too great an Abstinence in Drink, from whence Burning Pains are often produced. Children sometimes are subject to Cicks from Eating of Crudities, whence the Milky Vessels obstructed, the Acid increaseth, the passage of the Chyle into the Blood prevented, or depreaved before it comes there, of which we shall Treat in its proper place.

§. 10. Prognostick.

THIS Fever is very Dangerous in the Event of it: for it is often Mortal, especially if it is in the third Degree, if the Patient is extraordinary Lean, the Urine Cloudy, Night Sweats, and Continual Heat, &c. The first and second Degree is more easily cured than the third; so that which is in a manner radicated with a Consumption is most difficultly cured. So also is it when any of the *Viscera* are Corrupted, Enflamed or Exulcerated; for in this Case the Blood is so infected, and disordered that it is almost impossible by any means to reduce it to its Purity, though in Boys and young Men, and

Simple the Cure is easier.
 Hectick Fevers generally Rage
 the fourteenth year, to the
 fifth, and those that are Sick
 at Age are hardly cured, but
 who are Hectical before this
 or a little after, more easily
 are, and are often cured, or pro-
 their Life by some Palliative
 especially Women. A Loose-
 happening upon it, is no good
 If a Hectick assaults one
 Corruption in the Lungs, or
 other part, 'tis very difficult,
 possible to be Cured, but if
 other Signs there happen a
 of the Hair, it is incurable.
 The greatest Hope is, if the
 Nurse, and Physician do
 they should do.

II. Dietetick Cure.

NOW let us come to the
 Cure it self, and first to Di-
 which consists in the due obser-
 of the six non-naturals, for the
 of Remedies is taken from
 and Pharmacy; as in all other
 Diseases Diet doth much,
 particularly it is of so great
 importance, that it does many
 more than all the Medicines
 given. Therefore choose a
 moderate Air, or make it so; such
 inclines to Cold, and moist,
 according to Dr. Syden-
 Advice, Change of Air, and
 may do much good. Ga-
 Merb. c. 8. in the hottest
 of Summer orders his Patient
 under Ground, in a place
 very Cold, and much open
 Wind. By which Remedy
 was observed, that one who
 extremely Hectical, was cured
 Months time. The Air in a

Chamber may be altered by Sprink-
 ling the Flowers of cooling Herbs
 with Spring-water. The Air of
 one Country or place is worse than
 that of another; so in the Precincts
 of *Hanover* this Distemper is En-
 demical and peculiar to the place,
 with Exulceration of the Lungs; for
 the Rigid, Inflexible and sharp Par-
 ticles of the Air, easily entring in-
 to the Mass of the Blood and alter-
 ing it, render it Corrosive, by
 which the little Bladders of the
 Lungs being Eroded they become
 Exulcerated.

Let the Food be of such things
 as sweeten the Blood, of good Juice
 and easie Digestion, or Nourish-
 ment, as Broths of Hens, Crabs,
 Capons, Veal, with Yolkes of Eggs
 and cleansed Barley. Veal, Pig, Phea-
 sant, Partridge or young Hare, &c.
 are good. *Panada's*, all things
 made of Barley, Oates, or Rice
 with the Cold Seeds, are also pro-
 per. Divers Garden Herbs, as Pur-
 slain, Endive, Sorrel, and Borrage,
 and such like opening Roots, if
 Boyld in Broths. In this Disease
 also Fish that live in Rocky, or
 Stony places are excellent. As for
 Fruit, Apples, Pears, Prunes, Cher-
 ries, Grapes, Figs prepared and
 boyled with Honey are very good.
 They that have a stronger Stomach
 may use more Solid and Viscous
 Nourishment, as Calves-feet, the
 Flesh of Snails, Crabs, Tortoises,
 Frogs and Cockles in their Broths.
 To the more delicate we give the
 Pulp or Flesh of Capons, and Par-
 tridges, Almonds, Pine-Nuts, and
 Sweet-Meats, and particularly Gel-
 lies. The following one is very
 good,

Tak:

Take of the fresh Gelly of Harts-horn three Drachms, pour to it two Pints and a half of Spring-water, of Red Wine half an Ounce. Digest it for twelve Hours in a Glazed Vessel, afterwards add of the Root of *Scorzonera* half an Ounce, the Root of Succory two Drachms, Endive Leaves a handful, Raisins Skinned three Ounces. Boyl it a little more than half away, strain it and add of the Confection of Alkermes a Drachm, place it in a Cool place, in a cold Vessel, and it will become a Gelly.

All things made of Milk are here very proper.

Let the *Drink* be Barley-water, or a clear Drink made of Opening, Roots and Barks; or, which is better, a Decoction of *China* with Raisins, as also Emulsions. All strong Spirituous Drinks are dangerous, and many times cause this Disease, yet small *Rhenish* or *Mosel-Wine*, with a little Water mixt in it, may be allowed.

Let their *Sleep* and *Exercise* be moderate.

To keep the *Body* open, now and then a Glyster of Mollifying Herbs will be very proper, and you must promote the Natural Evacuations, but as for others, have a care of them; as the voiding of Blood, &c.

Let the *Mind* be at ease and Cheerful. Sadness and Grief are very destructive here, and have often caused a Heetick. Let the Patient forbear Venery, which waits and dries the Body much.

§. 12. Pharmaceutick Cure

THESE things premised, us come to the Pharmacopoeia or Medicines here to be used, which according to the Galenic thus;

Those, who to correct a dry hot Indisposition, commend Opers, and Moisteners, are of opinion that in this Case, those moist things are restorative, therefore they prefer them to Coolers, which given in Excess, may even destroy the Natural Heat. Amongst Moisteners and Coolers are reckoned Flowers of Water-lily, Roses, Iolos, Borrage, Endive, Lettuce, Celery, Succory, the four cold Salts, &c. of which they make up several Compositions. At Beginning, if the first Regimen be foul, they prescribe some Purges, as *Manna*, *Cassa*, &c. of Roses Solutive, and if the Regimen is strong enough, sometimes an Infusion of Rhubarb, with Tamarinds. As for Alteratives they reduce them into the form of Broths, and Emulsions, which are amongst Practitioners.

Baths, which, as they say, are both cooling and moistening, they prefer beyond all other Remedies in which they put Mallows, Lettuce Leaves and Bears Breech, &c. to render it more moist. *Zacutus Liberavius obs.* 35. l. 3. *praxis* & *rande*, commends extremely a Bath of Water and Oyl. Some are for a Bath of pure Milk, after Bathing they anoint the Body with Oyl of Lilies, Violets or Rose, and apply outwardly cooling and moistening Medicines to the Breast, Liver and Kidneys.

§. 13.

will cure an Heetick in a Months time by his Secret, yet never tells us what those are. Helmont follows him faithful Disciple or Scho-

§. 14.

according to the different Causes that produce this Heetick, proposeth different Medicines in general, by reason of the Acridities, and Glutinosity of all Humours, he adviseth the more Spasmodick Medicines, and Oily Salts, because they cut and dissolve the Humors, and reduce them to their first purity.

He recommendeth also Asses milk, Mares milk, Goats, or Cows milk, taken warm.

For fixing a Methodical Cure according to the Diversity of Humours, you may establish it from what hath been already said. He says well also, that if the Heetick proceeds from any Inflammation, Aposterns or Fistulous Ulcers, it is scarce cured without drawing at the same time Remedies appropriated to those Disorders. Amongst Consolidating Medicines, he praiseth the Sweetened Balsam of Sulphur, as the more fixed Medicines of this kind, but not any thing that promotes Vomits or Stools. He commends also a Vulnerary

§. 15.

IN Our Judgment this Disease hath these following Indications. First, That the Blood be sweetened, and corrected; for then there would be no longer Vexation of the Animal Spirits, but all things would move pleasantly. Secondly, That those Diseases be cured, from whence the Heetick proceeds; or which are continually a-causing some Acrimony to be mixt with the Blood. Thirdly, That the Symptoms that attend the Heetick be mitigated.

For those things which correct, and moderate the Sharpness of the Blood, are most proper here; as the milder Volatil Salts, and earthy Substances, provided they contain in them a great Quantity of a pleasant gummous Volatil Salt; as Crabs-eyes, Unicorn's-horn, Pearl, Harts-horn, Bone of a Stags Heart, Bole-Armoniack, *Terra sigillata*, *Lap. Percarum*, *Asellorum*, &c. Amongst Minerals, you may use these; viz. *Antimonium Diaphoreticum*, *Bezoarticum Mineral. Solare*, *Lunare*, *Joviale*, *Specificum Stomachicum*; as also that famous Anti-heetick of *Poterius*, of which I have as yet seen but little Success; and if it hath any Virtue, it is in concentrating the Acid, which Crabs-eyes will do very well. The kinder sort of Medicines, as Turpentine, Rosin of the Larch-tree, *Gum. Ammoniacum*, and *Galbanum*, are used with great Success, because they have something in them that is glutinous, and gummy.

Cooling Medicines, so called by the Ancients, are not profitable, as cooling, but, as sweet'ning, opening and tempering. First, All Watery Medicines, in which there

is any Volatil Salt, are profitable, such as the common Coolers, which cut, and attenuate; as Succory-roots, or the whole Succory, Dandelion, Sorrel, Leaves of Bugloss and its Flowers, also the Flowers of Violets, Furnitory, Sorrel, &c. Secondly, all watery, spirituous, and sweet things, which are void of Sharpness, are good; as *French, Spanish,* and *Canary Wines*, Meed and such like, in respect they correct the sharpness of the Blood, and fix and pacify the Spirits; for which Medicines of Lead also are excellent. Here also the lighter and more gentle Antiscorbuticks, and Diaphoreticks, are proper, some forms of which we shall set down here. I have known several recovered with the following distilled Anti-heetick. I would not have the heap of Simples that enter its Composition deter the Reader.

Take a Capon with the Entrails out, boyl it in an earthen Pot, the Bones being bruised, with eight Pints of Broth, infuse in it of the shavings of Sassafras-wood half a Drachm, Man's Skull, Elk's-horn of each three Drachms, China-root an Ounce, Tincture of Scabious, Liver-wort, Fluellin, Rosemary, Flowers of Peony, Line-tree, Scabious, Colts-foot, lesser Daify of each half a handiul, *Rasur. subtil. Visc. Pyfor.* an Ounce and a half, the Crum of White-bread, old Conserve of Roses of each three Ounces, one Fox's-Lungs took hot out of the Body, Hens-livers, cleansed Snails of each Ten, Frogs fifteen, the juice of Brook-lime a Pint, or in Winter-time instead of the juice two

Pints of the Destill'd Water the same, which may be finned with pearled Sugar.

With which distilled Liquor may make Emulsions, and every day take them after the following Manner.

Take Green Melon-seeds Drachms, *Aq. Anti-hectica* six Ounces, of pearled Sugar sufficient Quantity. Give for one Dose about the following. Or,

Take Pine-nuts two Drachms, Hemp-seed a Scruple, *Aq. hectica nost.* three Ounces. Make an Emulsion, to which add of Milk of Sulphur a Scruple, of rich Cordial powder eleven Grains, pearled sugar a Drachm. Mix them for one Dose.

It is better to give your Medicines in a Liquid than a Solid. Let the Diet be as it is usual before.

Amongst Alteratives, I must prove of Raisins, which not moderate or correct, but enrich. Boyl them with the Root of Succory, China, or Scorzoneria, infuse them a whole Night, and the next Morning strain them a little boyling, and so give it. This is an Experiment of the great *tmullerus*.

That excessive Heat in the Palm of the Hand, and bottom of the Feet, is best removed by Water Medicines, as Juleps of Borlaster, Baum, Borrage, Lettuce-cory with a little Cinnamon, Bugloss, Rasp-berries, sweet Pomegranate, and such like. Medicines also that have a pleasant sharp

When these things fail us, we must come to Milk, which hath recovered many. Either the Patient may suck Womens Milk from the Teat, or Drink Asses Milk warm, which is best, or Cows Milk, which we mention'd before. In the mean while he must abstain from all other Meats. Butter of Womens Milk is very good also, and Whey mixt with a little Juice of Citron.

In the Afternoon a Bath of Fresh Water, Milk or Olives for half an hour, is very good; as also Alum-Baths.

If there comes a Fit after Eating, some Mineral Febrifuge may be taken.

All things that swallow up the Acid, are of great use here. Salt of the *Caput Mortuum* of Vitriol, and *Crocus Martis aperitivus*, are great Secrets in this Disease.

Cray-fish are very good to destroy that Salt Acrimony in the Blood.

Purging and Bleeding are here to be omitted, as dangerous; yet an Opening Glyster is profitable, provided it be not sharp, and if a fresh and green Briony Root be added.

If from the Viscidity of Humors, sticking in the ural passages, there appeareth a necessity of Purging, you may mix some Sudorifics with your Purges, but in a small Quantity, for otherwise they cause mighty Obstructions.

If the Patient grows Weak, *lac. Perlarum* is very good.

When there is an Exulceration in the Bowels, Balsamick Medicines are most proper, as the Anisated Balsam of Sulphur, and all

Wound-Potions, especially Traumatick Essence.

He that desires to obtain another way of sweetning Alum, let him proceed thus; Let him powder Alum, and destil it in a Sand-heat, then take the Phlegm and add it to its Body, and repeat the Destillation for many times, till the whole Phlegm remains in its proper Body: then let him bruise the Alum thus prepared and dissolve it into a Liqueur in a moist Place *per Deliquium*. Then digest this Liqueur in a Bath of twelve or fifteen days; afterwards when by Filtration you have a clear Liqueur, coagulate it with gentle Heat. This is not only good in all Fevers, but also in Distillations of the Breast, and especially in Hætick. The Dose is from three Grains to Fifteen in a convenient Vehicle. If you cannot have *Manna Aluminis*, so called, it is good, as we have found by repeated Experience, if it be deprived of all its sharpness by many Operations; for there is no way so proper to stop those troublesome Night Sweats, as by the use of this Aluminous Liqueur and the Anti-phthifick Tincture taken in the Night, and moderately season'd with some gentle Acid.

Amongst Outward Medicines we commend anointing with Man's Fat, *Unguentum resinosum*, *rosaceum*, *resumprum*, the Oyl of Frogs, and Butter of Womens Milk: Epithems also of Rose, Violet, Borrage, Sorrel, Baum waters, &c. may be applied to the Heart, and Liver. But enough of Outward Medicines, for they do but little good.

As for *Catarrhus* Fevers (which
are in the Winter-time, and
suppose either a fulness of Hu-
mor in the Body, or the stoppage
of the Pores) Bezoardicks are
proper, mixt with some Ano-
dine Pectorals. All preparations
of Amber are good also: so like-
wise the Pectoral Elixir, with the
Bezoardick Tincture. Venesection
is dangerous, because Nature
is already thrown the Peccant
out of the Vessels. The
fever seldom fails here, if well
managed. It is sometimes infecti-

Amongst these Fevers is reckon-
ed the Purple Fever, which is ei-
ther benign, or Malignant. This
fever, like the Malignant Fe-
ver, is accompanied with great
heat in the Head, and small Sweats,

There is an Itching in all Parts
of the Body, wherever the Signs
of the Disease appear. There is
a sharp and burning Heat. It
is a Disease betwixt an *Erysipelas*,
and an Itch, and is distinguished
from the Spotted Fever and Mea-
sles by the marks in the Skin. It
arises from sharp, salt, serous
Humors in the Blood, which Na-
ture presently flings off to the Cir-
culation. It is often occasioned
by too violent Motion. Young
Persons are subject to it, and
more so from their moist Con-
stitution, more than Men. Some-
times it riseth from the Retenti-
on of their Natural Purgations

after Child-birth. Amongst remote
Causes are, the heat of the Liver,
and excessive Venery.

Where there's no Malignity,
Purging and Bleeding are a pre-
sent Remedy; for Bleeding is good
for those that are often troubled
with an *Erysipelas*. Those things
which Purge away Water, and
Choler are best in this Case. As
for preparing Medicines, all those
which are commonly called cool-
ing *Hepaticks*, are good, yea,
they do the Cure sometimes of
themselves. And generally all
things that are good in the Itch, or
Erysipelas, are also good here;
as Fumitory, Elder, and all tem-
perate Anti-scorbuticks. So also
Preparations of the Woods, as
their Essences, and Decoctions,
Rob Sambuci, &c. Also all Ni-
trous Preparations, as *Nitrum Per-
latum*, but in the Malignant Pur-
ple the more fixed, and milder Be-
zoardicks are to be given, for those
Bezoardicks which are Volatil, are
apt to promote the Inflammation,
except the malignity be whol-
ly to be cast off. But here you
must always have regard to the
foregoing cause; for Example, if
it proceed from the Retention
of the Child-bed-Purgations, you
must give such Medicines as pro-
cure their Evacuations; amongst
which are the Preparations of
Myrrh, and Saffron, *Elixir Pro-
prietat. Alexipharmacum Ef-
fent.* and the Spleen of an Ox.
Bleeding is proper also in this Case.

C H A P. V.

*Of Malignant Fevers, the Plague, Spotted
Fever, Hungarian Disease, and other Epidemical
Diseases.*

§. I.

AMongst the Numberless Calamities that invade the Life of Man, a *Malignant Fever* is not the least, which often with a Common fury doth equally destroy whole Nations, Cities, Towns, and Families, without any Distinction of Persons. It is a Disease most notorious, or famous for its Cruelty, Malignity, and dubious Event, in respect that it invades the very Capitol of the Soul, stifling on a suddain the Animal Spirits.

We comprehend all *Pestilential Fevers* under the general Name of *Malignant* ones: The *Petechialis*, or *Spotted Fever*, which has the Name of *Puncticularis*, *Peticularis*, *Strigmatica*, *Pulicaris*, *Lenticularis* & *Purpurata*, from the Resemb'ance of its Spots to Freckles, Punctures and Bitings of Fleas, is also called *Sem. pestis* and *Lues Pannonica*. The *Hungarian Fever* is distinguished from the common *Spotted Fever*, by that severe Symptom; (*viz.*) a Continual and almost intolerable Pain in the Head, and Orifice of the Stomach. This Distemper is usual in

Hungary, because of the Wines that grow there, and Multitude of fenny Places. From an observation of Years tells us, That the *Hungarian Fever* varied every year its Symptoms.

Yet since these Fevers differing as they are more or less Malignant, and are all to be cured by the same Method, I thought convenient to treat of them in the same Chapter, under the general Name of *Malignant Fevers*.

For that is a *Malignant Fever* which is of a cross and ill Humour, deceiving sometimes the Physician, and all those that attend him.

In a *Malignant Fever*, all the Symptoms are milder, as to Infection or Infection, than in the *Plague*, or any *Pestilential Fever*. A *Malignant Fever* is very bad, and therefore many times is a disposition to step towards the *Plague*, though it doth not always appear with the distinal Train, as *Bubo's*, Carbuncles, Spots, Measles or small Pox, nor is it more treacherous, strong or furious.

These Fevers have several Names from their several Symptoms.

ets appear, 'tis called *Febris*
typhoidalis, or a spotted Fever.
 if the heat is not so great, and
 Pain of the Head most vehe-
 ment, with a *Delirium*, Sleepiness,
 Dryness of the Tongue, it is cal-
 led *Febris Castrensis* or *Hungari-*
 ca. If the Symptoms are severer, and
 more dye than escape in the
 House or Town, and if Blew
 spots appear either before, or after
 death, it is called a *Pestilential*
 Fever; from which the Plague
 arises only in its *Bubo's*, and Car-
 buncles, a most Acute and Perni-
 cious Disease, attended with the
 Symptoms that may be, of
 which we shall treat in a Chapter by
 itself. More severe Symptoms also
 attend the *Malignant Fevers*
 of any other. They both assault,
 and kill many at the same time,
 and mock at the common Rem-
 edies, so that they are of a quite
 different Nature from all other.
 They are called also *Poysonous Fe-*
 vers, because they immediately
 proceed from some Poysonous
 Cricks either bred within, or co-
 ming from without. By some
 they have the Name of *Antimedica*,
 they may also be called the *Physicians*
George, because in this case they
 promise no certain Recovery,
 and are often forced themselves
 to fall a Sacrifice to them, as Ex-
 perience informeth us, of which
 see the Treatise of that Noble Gen-
 tleman, *Febr. President* of our
 College, about *Scorzonera*. It
 is called the *Plague*, only in re-
 spect of Men, not when Brutes or
 other Animals dye suddenly. An
 infection raged not many years
 ago in *Westphalia*, amongst the
 Cats, and of late seized the Cows
 in these parts, from which the Men
 were free,

§. 2. Part affected.

TO find out the Subject of
 these Fevers, necessity and
 even Method require, That the Seat,
 and nature of the disease be known.
 The Heart is said, by the Generali-
 ty of Physicians, to be the Prima-
 ry, and Chief Seat or Subject of a
 Fever, because it is the Fountain
 of Life, from whence a Preterna-
 tural Heat is communicated to the
 rest of the Body, and this they
 would demonstrate from the
 Pulse, which proceedeth from the
 Action of the Heart, and the pul-
 sifick Faculty, and fiery Spirits
 mixt with the arterious Blood.

Putting aside Prejudice,
 place the Seat of this Disease in the
 Blood: For as in Wine and Milk
 we observe strange disturbances, and
 Fermentations, why may there
 not happen the same in the Mass of
 Blood? Nor do we here exclude
 the Animal Spirits. The Secun-
 dary, and more General Subject of
 this Fever, are all the parts, in that
 the Disease, by help of the Arteries,
 invadeth the whole Body.

Thus also *Belmont* blames the
 upper Orifice of the Stomach, as
 infected with some contagious
 Poyson; and likewise the other
 Vessels, which serve for the Pre-
 paration, Fermentation, and Chy-
 lification of the Aliment, when
 these are rather to be called the
 Subject of the cause of this Disease,
 than of the Disease it self.

§. 3. Diagnostick.

THE Diagnostick Signs are,
 the Foundation of a true
 Cure, especially in this *Malignant*
 Fever,

Fever, where the Distemper admits of no truce, but privately devours the Patient. For it is very Treacherous. The greatest Sign that the Disease is Malignant, is, when it begins with a sudden failing of the strength; frequent Shivering, and very bad Nights, and is attended with Pains of the Back, and Loys, and Itchings, which are fore-runners of those Malignant Spots, which proceed from the corrupted *Serum* restagnating there. In the *Plague* there is always a Fear, or Pusillanimity, from whence the Pulse grows small, frequent, and unequal, and there is also a Palpitation of the Heart, Fainting, or *Syncope*, and the greatest Shortness of Breath. Afterwards commonly there follows a most violent Head-ach, Phrensy, and Noise in the Ears. The Urine is like that of those that are well, and often inclining to be Red. There is also Thirst, Watchfulness, *Vertigo's*, which are followed by Phrenies, Pleurisy, Convulsions, Epilepsies and many other Mischiefs. In some the Spots are red, in others they are very small, and in others of a quite different Nature. So from the Diversity of the Cause there arise diverse Symptoms. In the *Plague* there appear Carbuncles and *Bubo's*. Many Sleep profoundly; in some few there is a Gnashing of the Teeth, they are also troubled with a pain at the Heart, Vomiting, Loss of Appetite, Thirst; and in the *Plague* they are Molested with a Pleurisy, Lientery with Worms, a stinking Flux and Bloody Flux. In some I have observed Deafness. Others are almost Blind, and Weep involuntarily; also they have a stretching or gaping

of the Eye lids, especially in *Scurvy*, there is likewise a Bleeding at the Nose. Some have their Throat enflamed, which turns black, and do the Teeth; some are troubled with a Hiccough, which is the Sign that may be; and to be all the Faculties of the Body disturbed, and all the Actions inverted. There are also very violent burnings in the Stomach, and vinefs about the Heart. In one of the Body of one that dyed of the *Plague*, I found all the Entrails blackish, and gangrened. There arise also cold and insupportable Sweats, especially about the Fore-head. At last the Poyson of the Distemper discovers it more manifestly by Swelling behind the Ears, under the Axill pits, in the Groin and Knees, and in other places, by Black, Yellow, Red Spots, and Black Pusillanimities, Carbuncles, and *Bubo's*. Here I will not omit a passage that happened at *Francothelium* in the upper Part of the *Province*, Anno 1666. When the *Plague* raged with great Violence, a Servant Maid had a Carbuncle on the Top of her ring-finger, which either because she was Delirious, or through the Violence of Pain, she cut off with a Chopping-Knife, yet notwithstanding her whole Hand was mortified the next Day. For *Buboes* and Carbuncles vex, and torment the Patient even like hot Iron, nay, more than is credible. It is not necessary, that all these Signs appear in every one that is Sick of the *Plague*, but sometimes these, sometimes others, sometimes more, sometimes times fewer, according to the Nature, and Disposition of the Subjects, and Venom or Poyson of the Disease. In the *Hungarian* Fever,

there is a most violent Head-
pined with a pain in the Ori-
of the Stomach.

§. 4. Cause.

Order to the happy Cure of
Cures, there is no Physician
Sense, but asserts the know-
of Causes to be very necessa-
Therefore first of all let us
the opinion of the *Galenists* as
the cause of *Pestilential* Fevers.
make them to be occasioned
Putrefaction and Malignant
of the Humors in the
Cava: which Malignity they
to be less in *Pestilential* Fe-
than in the *Pestilence* or
it self. For they will have
the Causes in a *Malignant*
Pestilential Fever, as in the
Yell, but in a less degree; hence
Pulverius makes the *Plague* to
be in a profound and sordid
condition.

they condemn particularly, and
here, the Air, Climate, Man-
Living, and Contagion. As
Malignant Fevers, they deduce
from a morbid Disposition of
contracted by ill Meat or
Diet, which is very subject
to rot and corrupt. As for
Plague, they derive it from the
common Causes, to wit, the ill
condition of the Air, and the
influence of the Planets. *Kir-*
man and *Langius* make it to
be in a Verminous sort of Pu-
trefaction, or Corruption: *Simon*
a kind of Volatil Salt, that
Fermentation creates that great
order in the Mass of Blood.

§. 5.

Herimont, who thinks the Prin-
cipal Nest of all Fevers to be
in the first Region, saith, *Chap. 17.*
Seet. 10. That the Seat of *Malig-*
nant Camp-Fevers, is very strange
and unusual, as also the spreading
of them, whilst they have their Ori-
ginal from certain Vapours, arising
from marshy Grounds, Minerals,
ill Smoaks, Hospital-scents, and cor-
rupt Stinks, which passing through
the Lungs into the Breast, assault
the convex Superficies of the Sto-
mach, leaving behind a Malignan-
cy. He derives the *Pestilence*
from an Acid in the Veins, and is
of Opinion, That the *Plague* is the
quickest and severest Fever, and
fluctuates in the *Archæus* like
Poyson. And he saith, A *Malig-*
nant Fever alone always draws
something of Corruption to it a-
bout the Orifice of the Stomach;
and that those Fevers are worse,
whose Seat is rather on the outside
of the Stomach, than on the in-
side, because that part is in a man-
ner out of the reach of Reme-
dies. And therefore the Camp-
Fevers, and those that are Epide-
mical, are more troublesome than
others, and are for the most part
without Thirst.

For these Fevers, saith he, only
infect from without, corrupting
the last Nutrient of the Stomach,
because as long as there is Life in
the Body, there is Expiration,
and Perspiration. For he hath De-
monstrated that the Lungs, and
Diaphragma are both full of Pores,
through which those Malignant
Vapours we suck in with our
Breath, seize the Stomach, and of-

ten

ten corrupt the Nourishment thereof. For he distinguisheth the *Plague* from other Fevers, which has not its Seat in a Febrile Filth, or in the Blood, but affects the Vital Spirits with its ill Scent, which together with the Air we suck in, passeth immediately through the Pores of the *Diaphragma* to the Stomach, and not being able to go any further, leaves there its fatal Impression, from whence proceed Vomits, Head-achs, dead Sleeps, Phrensies, Swoonings, and the like.

Helmont allows of two Causes in Nature, and no more; (*viz.*) Matter and the Efficient Cause: The Efficient Cause in the *Plague* he calls *Archæus*, *Vulcanus* or *Semen*. The matter of it, he says, is a wild, irregular Spirit tinged with Poyson. Which he considers either as it comes from without, and is wholly and perfectly Pestiferous, exhaling from some Person or Carcass that is Pestilential, or from some nasty, infected place or thing: or else as it proceeds from some ill Vapor of the Earth, which being drawn in by the Lungs, grows by degrees of Fermentation Pestilential. The *Plague* therefore is either wholly generated within, without any foreign Assistance, or is altogether from without. So that according to our Author, it is an *Ens Naturæ*, subsisting in us of it self, and consisting of its own Matter, Form and Properties. In another place he calleth the *Plague*, *Venenum Terroris*, and proves that its primitive Seat is in the Hypochondries. He will not have the Matter of it to be any solid Body, or visib'e Liquor, and therefore no conspicuous Putrefaction, but a *Gas* separated

and degenerated from the stance of the *Archæus*. For he affirms that whatever visible eruption appears in the *Plague* not so much the matter whence it proceeds, as the manner in which it resides: whence he infers, that Carbuncles, Bubbles, Escars, are not the Original Matter of the *Plague*, but rather Effects of it: He saith, The remote Cause of this Black putrefied Air or Gas; and that that which comes by Gas although it be milder than which ariseth from an ill Cause, yet is for the most part fatal, because in this the *Archæus* has its Residence in the Matter is destroyed, from whence a Pestilential Gangreen of the For the rest Consult the himself.

§. 6.

WHILE in all Malignant Pestilential Fevers, *Plague*, Small Pox and Measles, holds, That the Blood is tinged with some Poysonous Influence, and is therefore subject to various Coagulations and Concretions; in which Malignant Fevers not only the Spirit and Substance, as in Putrid Fevers, grow thick and troublesome, but with a mighty Effervescency, burst the very Texture of the Blood is dissolved, and its Liquor divided into several parts, from whence proceed those horrible Symptoms, not without danger of Life. It amineth also the Causes of those Poysons, and holds, That the Subjects in which the Infection immediately setteth, are those

Animal Spirits, and Blood in Vessels and Heart. He plain-ly shew how they are hurt by those Poysons. He saith, There are some Poysons which dissolve the Blood, and too much precipitate the Serum, as some stronger Purgers do. But there are other Poysons a-little more dangerous, which congeal the Blood, and by destroying of the Nature corrupt it, inducing Congelation, and then a Putrefaction.

As to the Animal Spirits, which are very fine and subtle, if any of the Nature of Poyson be amongst them, which consist of such fierce Particles, that they have a great Effervescency upon the Nervous Liquor, the most precious Portion of it is either driven up and down, or altogether stopped, whilst the rest of the Nervous Juice by some astringent is fixed, or by an Ebullition becomes unruly; from whence follow those Distempers of the Brain and Nervous Parts, (i. e.) Convulsions, Trembling, Shivering, Stupor, Palies, and other several Symptoms.

The Author describes the Plague (viz.) A Contagious Epidemical Distemper, very fatal to Mankind, proceeding at first from Contagion in the Air, and afterwards propagated by Contagion, which privately and lurkingly spreads upon Men, extinguishes the Animal Spirits, coagulates the Blood, mortifies the Solid Parts, and is attended with Bubbles, and Carbuncles, and other horrible Symptoms which threaten the Sick Person with Death.

And he differenceth the Plague

thus; in that it is sometimes peculiar to this or that Climate, sometimes it rages in several places at the same time, sometimes it is complicated with other Symptoms, and Distempers, and sometimes it is milder and less destructive than at other times.

The cause of this Pestilential Disease, in the Opinion of our Author, is the Coagulation of the Blood and Nervous Juice, like Milk turn'd sowre, or that has had some Acid pour'd upon it, whence the parts of it, being mightily infected soon curdle, and, like Blood extravasated, grow black and corrupted; whence the Motion of the Blood in the Vessels and in the Heart is stopped, and by reason of its Fermentation becomes more coagulated: Now whatsoever by Congelation is curdled, unless it be immediately evacuated, by stopping the Circulation brings Death on the Patient, and being driven to the Circumference of the Body, there sticketh betwixt the narrow passage of the Vessels, and either being altogether destitute of Spirits, as if it were Planet-struck, by its Mortification there, causeth Black or Purple Spots; or from the Salt, and Sulphur exalted by the Pestilential Ferment, and becoming turbulent, causeth several sorts of Swellings.

Our most famous Author describes a Carbuncle after the following manner. A Carbuncle (says he) is a fiery hot Swelling, with abundance of little sharp and burning Pimples about it, and a most violent Pain, which discovering it self indifferently in several places is not Suppurated, but spreading more in Circumference

cumference, burneth the Flesh and eats away whole pieces of it, leaving behind it a hollow Ulcer, as if a Caustick had been laid to it.

So also he learnedly treats of the Nature, and Original of Carbuncles, Bubo's, Purple Spots, &c. in his Chapter of the Pestilence.

He saith, *Pestilential* and *Malignant* Fevers differ not only from the *Plague*, but from one another, according to the Degrees of Contagion, and Fatality. The *Plague* is a Disease that is infectious in the highest degree; a *Pestilential* Fever generally rageth with less Infection, and less Mortality. When there is only a suspicion of Infection, and the *Crisis* only more uncertain than in common Fevers, it passeth for a *Malignant* Fever, which is wont to seize several Persons in the same Parts or Country, after the same manner, and is in appearance like a *Putrid* Fever, and has almost the same *Crisis*. But if many Persons dye, and those who converse with the Sick, are infected with the same Disease, and if it spreadeth through whole Towns or Cities, it is then called a *Pestilential* Fever.

Our Author reckons *Pestilential* and *Malignant* Fevers amongst the number of *Continual* Fevers, and lays the fault upon the Sulphureous part of the Blood, which he saith is heated and fired into a Fever, and in these sort of Fevers he observeth an extraordinary Malignity joyned with the Effervescency.

But he thinks the Effervescency is performed after the following manner: The Sulphureous part of

the Blood growing extraordinarily hot, by its heat is set on fire, and whilst it burns, it heats a great deal of adust Matter in Blood, from the subduing, including of which, the *Stages* of *Crisis* do depend, as in other Fevers: Moreover the Blood is tainted with a Poysonous Ferment, by reason of its malignant Ferment, begins to coagulate, putrefy: and from some coagulated Portions of it, there arise Swelling Fits, Faintness, Spots, Marks, &c.

So according to him, the Contagion is Propagated by the *Effluvia* that come from the Sick Persons Body, from which Contagion or Infection according to the degree, or force thereof, a Fever is called either *Pestilential* or *Malignant*.

When a Malignant, and Poysonous Ferment is joyned with the Preternatural Effervescency of the Blood, there do not only succeed Coagulations and a Disposition towards Putrefaction in the Blood thereof, but also the Nervous System is infected, by which means it being grown unfit for the Brain, the Government of the Animal Spirits, there follows a great Disorder, and irregularity of the Functions. Whence in these Fevers not only Spots and Pimples rise; but Madness, Phrensies, dead Sleep, Trembling of Joynts, Cramps, and Convulsions succeed. Hence our Author in some certain years has observed several *Malignant* Fevers, which without any appearance of Marks, have chiefly exercised the Virulency or Fury on the *Genus Nervosum*.

Our Author is of opinion, that

Blood impregnated with
Poysonous Particles, boyls
of its own accord, which Par-
ticles, he conceives, may either
exist in the Mass of Blood, or
be taken in with the Air: If they
arise from corrupted Air, the
Disease is General and more Popu-
lar; if from a particular indispo-
sition of the Body, then there is
here and there one that is sick
of this Disease.

Malignant and Pestilential Fe-
vers are sometimes observed with
a particular Symptom, some-
times they are accompanied with
others, sometimes with a Pleu-
risy, sometimes with an Inflammation
of the Lungs, sometimes with a
Dysentery, &c. which as our Au-
thor saith, happeneth not be-
cause of the Infection by some pecu-
liar Quality seizeth on this, or that
part of the Body, for it doth equal-
ly affect the whole Mass of Blood,
and the Crisis is to be endeavour-
ed in all parts alike. For when
the Fever is without any Malignity,
the Coagulation of its Coagulation, or
other causes does extrava-
se in the usual places in which it
is wont to rest, are the Throat,
the Pleura, and the Interstices.
Therefore it is no wonder, that,
if there be a Malignant Cause there fol-
loweth a Coagulation and Extravasa-
tion of the Disease should fix it self in
the natural Subject.

§. 8.

From this it derives all Malignant
and Pestilential Fevers from
Poysonous Particles com-
municated to the Blood, which are
either taken in with the Air by the
Lungs, or by the Pores of the Bo-

dy, or with Food at the Mouth.
And these Particles, saith he, cause
Burning and Malignant Fe-
vers, Dysenteries, and the Plague
it self.

In almost all Malignant Fevers,
he hath observed that the Blood is
more fluid than at other times,
which he saith happens in Burning
Fevers, the Plague, and sometimes
in the Dysentery, (viz.) as often
as the Choler or Bile of it self is
corrupted, from whose Excessive
Acrimony, or Sharpness Fevers pro-
ceed, and indeed Burning Fevers;
a certain sharp Acid also concur-
ring at the same time, and stir-
ring up a Malignant Effervescen-
cy in the lesser Intestines, from
whence is occasioned a dreadful
Dysentery. For when, as he saith,
there are but two Sharps in Na-
ture, a Lixivious Saline, and an
Acid, as often as they meet, and
clash with each other, they con-
stitute a third or middle Substance
that may be less sharp because bro-
ken; yet with a stronger Fire, it
may become at last more sharp,
and so much more dangerous as
more difficult to be mitigated, and
from its Volatility and Subtilty
causing great, and sometimes dead-
ly Changes or Alterations in us.
Thence he is of Opinion that Malig-
nant and Epidemical Fevers have
their Rise from corrupt Air. He
saith all Poysons derive their Force,
and Efficacy from one of those
two Sharps.

From the Collation of Sym-
ptoms he judgeth the cause of Ma-
lignant Fevers to be for the most
part, if not always, a Volatil sharp
Salt, which by concentrating the
subacid Liquor of the Glandules,
renders it weak and sluggish,
from

from whence the Natural Consistency of the Blood is diminished, and so its Rarefaction prevented, and very often the Secretion of the Animal Spirits hindered. According therefore as that Volatil Salt, sharp, or not sharp, is either carried by Inspiration into the Lungs, and thence into the Mass of Blood; or with the Nourishment, and Spittle descendeth into the Stomach; or, as we said before, passeth in at the Pores of the Body; hereupon saith he, doth the difference of Symptoms in Malignant Fevers depend, as also upon the Humors that abound in each Body. He deduceth the weak and languishing Pulse from the Inconsistency of the Blood, and the sudden and unexpected Death, from the stirring and extinguishing of the Vital Flame.

Therefore according to him the cause of all Malignant Fevers comes from abroad, and never from the spontaneous corrupting of Humors in the Body. Thus he will have all Malignity to consist in a volatil, sharp Salt. He also maketh the cause of the Plague, to be a too great Fluidity of the Blood, which is caused by a sharp Volatil Salt, from which Volatil Salt he deduceth, in his *second Tractate of the Plague*, all the Phenomena that attend it, which the Reader may peruse, if he please.

§. 8.

We with *Willis*, before we come to the thing it self, will in short treat of the Nature of Poysons, seeing that from the knowledge of them, we may easily learn the Nature of the Plague, and all Epidemical

and Malignant Fevers, because their force, and Efficacy consisteth in the Solution of Continuity, whether they act upon the Body without, or exercise their Trade within. Therefore those Antidotes it appears to any Learned Man, not by an Occult, but by a Natural Quality; nay, there is not an Antidote of whose effect, or operation a probable Reason cannot be given. For we reckon all Antidotes in the number of three, that decies, that attenuate, that volatilize, absorb, and take off the Edge of sharp things, which administered according to the nature of the Poyson; which consist in a certain kind of Volatil, Glewy Substance, and a coagulatory Salt that is viscidous; or in certain sharp Particles, that are apt to cause Mortification in the Part, and utter Subversion of the Animal Spirits. Hence follow divers Effects of the Mind, Phrenesies, Madness, Frigidity of the whole Body, Swellings, and Ulcers, Erosions and Eating of the Flesh, and such like Symptoms as arise from Poysons. Therefore the Particles of Salts being grown thinner by heat, are carried farwards through the Air, and wandering very far, in the end against hard Walls, and they grow sharp at the Points and like Daggers. Many of these fine Particles being joined together, become Corrosive, which according to the Diversity of Matter with which they are composed in the Microcosm, are Minerals; as Antimony, Arsenic, Cobalt; and these Particles

erected by the heat of the Bo-
dy up and down, and by break-
ing the Natural Texture, melt
the Mass of Blood, attenu-
ate it more than what is neces-
sary to the disturbance of the A-
nimal Spirits, and creating of
Scurvy, Vomiting, Gripes,
Fainting-fits, Trem-
blings, Madnes and
horrible Symptoms.

Things being granted,
it easily shew, how these Ma-
lignants, rising from the Bo-
dy to the Air, and grow so
near to Mankind. To
which, you are to observe,
that thin Vapours are more
abundant, according to the
heat of Summers. There-
fore the heat of the Sun is so ex-
cessive, that these sharp, and Vo-
latile or Poysonous *Effluvia*,
which through defect of
Fire could not be elevated to the
Surface of the Earth, are
by greater Rarefaction grown
lighter and nimble, they may
not only above the Surface of
the Earth, but also wander into
remote Countries. And the great
Cracks or gapings of the
Earth, there are, either from the
passages of Waters, or from
Earthquakes, the greater plen-
itude there be of Infections and
Animal Exhalations. Which
may, for contagious Parti-
cles, as experience too much
teach us, also may arise from
stagnant Pools, dark Deins, and
Holes; as also from loath-
some Carcases; whence proceed
the *Malignant* Fevers.
In Camps amongst Souldi-
ers the *Malignant* Poyson is of-

ten occasioned through Nastiness,
and Filth, and the Plenty and Va-
rious Colluctancy of *Effluvia*.
Sometimes through Famine, and
the Consequents thereof, our Bo-
dies are more disposed to receive
this Infection. And to come clo-
ser to the business; we must ob-
serve, that the *Plague*, as well as
Malignant Fevers which only dif-
fer in degree, take their Source
from the Air, which is as well
the Fountain of Death, as of Life
and Health.

This Air is that which sup-
ports our Breath, which with
our Spittle passeth to the Sto-
mach, enters the Pores, and be-
ing communicated to the Blood,
and its *Serum*, is carried by Cir-
culation to every part. From
hence it appeareth how the Air,
impregnated with these sharp
and Volatil Salts, infects the Hu-
mors of the Body, especially
the Blood, to the utter Sub-
version of the Animal Spirits,
and Destruction of the whole
Body. For those sharp Parti-
cles, being joyned with the Spit-
tle, Chyle and Choler, (that is
much like it) grow sharper; just
as Sublimated Mercury, and *A-
qua Stygia*, when put together,
are more and more by degrees
exasperated. By this it appea-
reth in what the Nature of Ma-
lignant Fevers consisteth, which
Spring from a mutual Separation of
the Particles of Blood from one a-
nother; but in a lesser degree than
in the *Plague*, wherein there is
the greatest Separation and De-
struction of the Particles: For
whilst the Texture of the Blood is
violated, the Animal Spirits are
in an uproar, flying here, and there
in

in confusion, and causing great Disturbances, as well in the Brain as elsewhere.

Some distinguish the *Plague* from a *Pestilential Fever*, but they differ only in degree; for they both proceed from the disturbance in the Blood; yet there may be a very great Fever, which from the suddain failing of strength, may be like the *Plague*. Malignity therefore is nothing else but a separation of the Particles of Blood from each other, which in this Case is not easily remedied. For there are several degrees of Separation, as it appears in Milk, which is one way separated for making of Cheese, another for making of Butter, and another way when it turns Sowre. Thus it appears also in the mixture of Blood, with the Spirit of Nitre, Vitriol and distilled Vriegar, and sublimate Mercury. The Pestilential Poyson raging up, and down, with its sharp volatile corrosive, and sulphureous saline Parts, cuts off the Fibres, and lesser Branches of the Blood, which being done, the other, grown heavy, and not easie to be moved, are jumbled into one heterogeneous Body, which is unfit for Circulation. The Sulphur is also very much corrupted, as it appears by the Stench, which in the time of the *Plague* flies about with its fiery Darts; whence *Borellus* c. 1. vol. 74. Speaks of a certain *Ermite* that could distinguish the *Plague* by its smell. The angry Enemy thus entred, and getting the better, seizeth on the more noble Parts, as the Heart, Brain, and Stomach, and other Parts, and placing a forreign Guard 'ore those Cittelds of Life, is not only content to

cause Syncope's, Tremblings, even mortal Anguishments in the parts, but to make Excursions to the royal Palace of Reason, committing strange violence on the cheif Governours of the Animal Spirits, tormenting them with intolerable Thirings, violent Head-ach, Watchings, Frenesies, Convulsions, and sometimes making an Entrance on to the Superficies, seizing the greater Glandules, and causing Carbuncles, Bubo's, and blowing to the final ruin and subversion of the whole Body. Here by way you are to observe that call'd a Carbuncle, because black like a Coal, and is likewise in other parts as well as fibrous and glandulous. Sometimes also it breaketh forth in inward parts, sometimes to be seen within the Tunics of the Stomach, as well inwardly as outwardly, which hath been observed by *Bartholin* and others, and then there follow mighty mittings from corrupt Blood that is coagulated in several places.

In the *Plague* there are also in the Glandulous parts, the sharp Particles of the Blood pass through the fleshy Parts, the Pores of the Glandules a little, they stick there, and cause Bubo's; but they proceed from most part from the *Lymphatic* vessels, which are vitiated and turned sharp.

There are Particles of a different Figure, which are driven by heat, and Ebullition of the Blood into the Pores of the membrane parts, which Pores if they do wholly fill up, but leave room for thin subtil Matter to pass thro

cause a Swelling, heat and
of the part, as we see in
inflammation, which in the
or its Tunicles, causes
in the Jaws or Throat a
in the Breast a Pleu-
in the Intestines a Dysente-
Astrologers fly to the
Positions of the Stars,
the Incompatibilities of Op-
and Malignant Conjun-
but what virtue the In-
of the Stars have, I could
yet conceive, or how they
work upon inferiour Bo-
bodies by a Motion of Light,
For the heat which
from the Planets or
itself but Weak, with-
assistance of the Sun, and
always in the same
so that to ascribe so great
in the Bowels of the
or in the Air, to them, is
arrantable by humane Rea-
For the Stars are given to
for to shew us the di-
of Times, Days, and
which as *Helmont* saith,
but Reliques of Paganism.
the most famous Astrolo-
and Mathematicians in the
as *Copernicus*, *Kepler*,
des Cartes, have confu-
the vain opinion of the occult
of the Stars, with solid
as, and as a thing contrary to
experience.
why some are infected
some later, some not at
with these Fevers, or the
when there is a common
proceeds from the diffi-
Texture, Motion, and Mix-
of the Blood: So in one it
thinner, in another more thick.

He whose Blood is thinner, or
more fluid, from the too great
Sharpness, and Acrimony of the
Bile, is sooner infected with this
Disease than others; on the other
side, he, whose Blood is well tem-
pered with a due Acidity of the
Pancreatick, or any other Juice, as
the Melancholy Man, is seldom or
never infected with this Disease.
For the Particles of the Blood be-
ing more closely joyned together,
with their united force support
the Animal Spirits against the
common Enemy, from whence
the sharp Particles of the poyson
being blunted, either remain in
the Body without any danger, or
pass through, where there is little
Resistance. It is a true rule, and
observation, That during the
Plague, every disease of the Body,
putting off its own Nature, de-
generates into the Plague. From
all which you may easily guess,
that the true cause of this, as well as
of Malignant Fevers, is a corrupt
Miasma, more, or less sharp, and
Volatil, disturbing and even dis-
solving the whole Texture of the
Blood with its rigid Particles.
For nothing is more fatal to
the Animal Spirits, than those
sharp, and Volatil Exhalations,
which stifle them, even as Smoak
doth Bees. The quantity of this
poyson is not material, since, as
Ettmullerus, Chap. 3. de virtute
Opii diaphoret. Sect. 13. obser-
veth, that it exerteth its force, and
disordereth the whole Oeconomy
of the Body, tho but the least
quantity, provided it be actua-
ted, and improved by the Native
Heat, just as Yeast in Ale, or Leven
in Bread, tho but small in sub-
stance, yet raiseth a great Ferment-

tation, and hence it is that a Gangreen, or Mortification is so often seen in the Bowels of those that are Sick of the Plague, as well, as of Malignant Fevers; as at *Francotbalium*, in the lower *Palatinate*, I saw a Woman and her Daughter opened in the same House, both the Stomachs of whom were perforated, black, and mortified. In some I have observed the *Diaphragma*, or Midriff; in others the Intestines as mortified, as if they had taken Arsenick. Almost all the *Phænomena* of this Distemper may be explained from the Dissolution of the Texture of the Blood, and the separated Particles reistagnating here and there. For Salt, and that Arsenical-Volatil Sulphur is most destructive to the life of Man, threatening destruction to the Animal Spirits, a dissolution, and after that a curdling of the Mass of Blood. It is clear that the Sulphur is in fault, from the extraordinary Heat, and Effervescency, as also from those Sulphureous Darts, or burning Globes, that during the Plague are seen here and there in the Air; for to what else can we ascribe it, than to an Arsenical Sulphur, whose deadly smell hath killed many, which we and others observed, during the distinal Plague which raged, *Anno 1666*.

Kircher thinks that there are Worms in the Plague, which may consist with Our Opinion, for those Worms are composed of sharp, and Volatil Particles, which are apt to produce the same Symptoms; hence some call the Plague a seminal Disease. According to *Wedelius*, all the Humors of the Body, the *Humidum radicale*, the *Lympha*, and *Serum* are infected.

That suddain Weakness in Diseases, sheweth that the when once infected, is Fermentation, as we may see when Precipitate Mercury is with the Blood, which Contagion raged at *Francotbalium* in the upper *Palatinate*, about year, one thousand, six hundred and sixty, which being severe and Stubborn, stopped the Fermentation of the Blood, and destroyed many.

The Head-ach in these Diseases proceedeth generally from sharp particles, that fall upon the Membranes, and disturb Animal Spirits.

A slow, and weak Pulse may happen also in other Diseases, proceeds from the Fluidity or teriffness of the Blood. In Men the Blood is hardly clotted, and at the opening of a Vein it flows out, but is nothing but a hard Clod, scarce penetrable with a Knife, within which is found no fibrous Blood; therefore it is no wonder, that it may dye within the space of four hours. In this case the Pulse is weak, which is an ill sign, it sheweth that the Blood contains scarce any Fermentation. *Alprun*, a Physician of *Vienna*, informs the Plague abounds with Salt, and sharp volatil Sulphur, opening a Pestilential Bubo, took the Virulent Matter, and put it into a Retort with a little Water, next a more fatulent Oyly matter, at length a Salt was separated, and the Vein separated, there came forth a

§. 9. Prognostick.

AS to the Prognosticks of Health and Death, they are here very uncertain, which Hippocrates l. 2. Aphor. 17. long ago acknowledged, in these Words: *The Predictions of Acute Diseases are not altogether certain.* Therefore a Physician must go on with a great deal of Caution, nor can he well judge of the state or height of the Disease without well examining, and weighing the Signs.

Where many dye, the Disease is judged more dangerous. Therefore it is best to suspend your judgment, till there appear some certain Signs of either Death, or Recovery. For it is hitherto observed, That the more severe the Symptoms appear in the *Plague*, and *Malignant Fevers*, contrary to what is observed in other Diseases, the greater are the hopes of Recovery; on the other side, the milder that the Symptoms are, so much the more dangerous.

A Malignant Fever is of the number of *Acute Fevers*, hence it usually lasts to the Eleventh, or Fourteenth Day. These severe Symptoms denote danger, as Swooning Fits, Cold Sweats, (which yet many have had without any harm) Looseness, extraordinary Weakness; but if the Symptoms are milder, there is greater hopes of Recovery, however there is no trusting to them, for they often deceive us, like some Dogs, who the less they Bark, the worse they bite.

As to the *Vital Faculties*, a good handsome, constant and equal Pulse promiseth safety, but

all Malignant as Continual, being, as also a moist, and dry-Skin, is a good sign; for it is an Argument that there remains still some of Serum in the Blood, and the Nature of it self performs its operation.

10. Dietetic Cure.

Having explained the Nature of Malignant Fevers, and agree with its Causes & Signs, necessary we say something of the Cure, which is performed either by Diet or Pharmacy. As for the Diet, that consists in the Legitimate use of the six Non-natural Things, to be temperate in the Air, let it be temperate such as comes from filthy Places, or that which arises from dead Carcases, in Camps, or stinking Places; for no man expose himself to the use of such Air without manifest danger to his Life: Let it be corrected by Fires here and there, of Brimstone, Aloes, and such sweet smelling within Doors perfumes of Storax, or Ox-horn, or Goats-bladder, Gun-powder, or Bezoardicum. In the Bed-chamber, Balls of Brags fill'd with Cordial Antidote, and exposed to the fire, to make an Artificial Air, is also commended; as likewise hanging of Bells, and frequent firing of Guns. But he that is seized with a Malignant Fever, let him be kept in a cold Air, for as sad Experiments informeth us, all those dye, who are exposed to the cold Air. Their Food be very little, but of good Digestion; Chicken, Calf, or Hen-broth, with Vipers-

grafs, and other altering Herbs, are here allowed: a very spare Diet is convenient, and necessary to those that are already Sick.

But all Pot-herbs, horary Fruits, all Purgers, as also all Salt Food, and any thing that hath Sugar, Honey, or Spice in it; and whatever is corrupted, or mouldy, is to be avoided. You may season your Meat with the kinder sort of Acids, as Juice of Citrons, Quinces, Raspberry, and the like:

For *Drink*, make a Decoction of Vipers-grafs, with Harts-horn, and Citron. *Crato* in his first Book, and second Epistle, testifyeth that a Drink of Harts-horn doth more good than all other Medicines: You may also use a Gelly of Harts-horn, and put into the sick Persons ordinary Drink some drops of my Cordial Tincture. Wine is not to be allowed, unless for the comforting of the Spirits, for all Spirituous things, in as much as they increase Acrimony, and render the Spirits unruly, are to be avoided; for the Sulphur being kindled by that Malignant heat, enflames the Blood. And *Neucrantz*, *Tractat. de Purpura*, as also *Hoferus*, observe, That whoever in this case have not abstained from Wine, have dyed; and I have known a Woman in a Malignant Fever, by excessive drinking of Wine, to fall into an Epilepsy. The use of Mineral-waters in this distemper is not safe. Let the Patient therefore use the foregoing Decoctions, and Juleps, or Emulsions of Almonds,

As for *Sleep*, or *Watchings*, let them be moderate, and not exceed their due Course. Sleeping at the Beginning of the disease without some previous Antidote, or Bezoardick is dangerous. Fff 3 As

As for *Motion*, and *Rest* they must be moderate, lest they cause too great a Fermentation of ill Humours in the Body: yet *Rest* is more convenient for the Patient, that Perspiration being preserved, the Body may discharge it self of that gross Infection through the Pores, and the Bowels be restored to their natural Tone.

Great care is to be taken also of the *Passions of the Mind*, especially Fear, Pusillanimity, Dread, Anger, Sadness, for these have a great Influence on the Blood, which the Sick are to avoid, for the Physician's reputation and their own Healths. Let not the Patient think worse of himself than he is, nor place before his Eyes the imaginary Messengers of Death; but let him with a full hope relying on God expect better things: For the Plague, like an *Ignis fatuus*, pursues the Coward, and flies from Men of Courage.

All natural *Evacuations* and *Retentions* are to be regarded.

§. II. *Pharmaceutic Cure.*

NOW let us treat of the *Pharmaceutic Cure* of these *Malignant*, and *Pestilential Fevers*; which according to the old *Galenists* is threefold, *Curatory*, *Preservatory*, and *Vital*.

They place the Pestilence in an occult quality, that is destructive to Man, and which indicates a necessity of Antidotes, and they assert, That the cause of this Infection (whether it came in at the Mouth, or by the Pores, or any other way) is to be removed, and rooted out. Therefore if the *Plague* proceeds from Contagion, and the Body be

Plethorick, they are premedicated with Bleeding, even in the Beginning, before the first twelve hours are over; for when the strength of the Patient is worn out by the violence of the disease, they do not allow of it. The *Galenists* do not omit not of Purging, unless the first passages are foul, and as occasion shall serve they administer Vomits. They judge the safest way of Cure, is by Antidotes, which they will have continued every twentifourth hour, so to be continued for three or more, till the force of the Infection or Poyson be dulled. They advise the Patient also not to sweat till he hath sweat twice; and when he sweats, they give him Cordials of Roses, as also its Symplics, the Syrup of Sorrel, juice of Citron, Pomgranates, and other diol waters; and to the Patient they hold some Aromaticks, and also sprinkle them about the Chamber.

After Sweating, if the Body be full of ill Humours, to let the Patient in this Conflict, they do not use the use of milder Purges, but the Syrup of Rhubarb, Tamarisks, Roses, *Pilul. Pestilential*. They commend all Medicines that resist Putrefaction, and that are good against Malignant Fevers. So when a Fever is present, they advise only Cordials as the Syrup of the juice of Citron, Sorrel, Rasp-berries, Pomgranates, as also Pearls, Coral, Precious Stones, &c.

Amongst Antidotes are that follow: Treacle, Mithridate, *Diascordium Fracassorii*, *Sphera Saracenica*, *Electuarium de ovo*; they say also that

Butter-bur is excellent to
the Poyson by Sweat,
Emplastrum de Gemmis, and *Læ-*
gus Galeni, and six hundred
of which they make a thou-
Prescriptions, too tedious to
listed here. But seeing that Na-
say they, very often drives
part of the infectious Poy-
to the Circumference, or Su-
of the Body, and raiseth
certain Carbuncles and Bu-
if they arrive not to their due
ity, and the Fever, with its
omons, abateth not, you must
our, as soon as may be, to ex-
the Poyson.
to which end they apply Vesi-
and scarify the Skin, for
vent of the Poyson, and
Humours. They also
about the *Anus*, to the great
of the Patient, young Chic-
or Pigeons with the Feathers
a dry Toad steeped in Wine,
for the Ulcer, they say it is to
like other Ulcers, tho' tis
to be Consolidated till all the
be Evacuated. For a Car-
they say, it is to be present-
ified, and indeed very deep,
the corrupt, malignant, stink-
Humour may flow out. Af-
that a Plaster is to be applyed,
Emplastrum de fuligine. Some
mend here *Emplastrum de*
igne Arsenicali. Some with
quire draw a Circle round the
uncle, to prevent the spreading
the Poyson: and if the Carbu-
grows too big, and causeth
Pains, they are for opening
Vein just under it, for a freer
thence of corrupt Blood:
to stifle the extraordinary heat,
they make use of *Emplastrum de*
serpillo. But during the whole

Cure they advise the use of the mil-
der Antidotes every day, lest the
smallest Grain of Poyson should
remain in the Body.

In *Pestilential* and *Malignant*
Fever they take the same course; for
in this case they are puzzled where
to begin first, or how the Maligni-
ty of the distemper may be taken
away without increasing the Fe-
ver, or the Fever removed without
any neglect of the Malignity;
therefore they say, where the grea-
test danger is, the greatest care is
to be used; hence also before the
fourth day, they admit of Bleeding,
Vesicatories, Purging, and Gly-
sters. But they put the greatest
confidence in Diaphoreticks, pre-
scribing now and then between,
certain Alteratives and Preparing
Medicines, such as are Sorrel, *Scor-*
dium, *Carduus Benedictus*, Vi-
pers-grass, Citron-seed, Roots of
Tormentil, Cinque-foyl, juice of
Citron, English Currans, Rasp-
beries, Pomgranates. Neither is the
use of several Topicks to be neg-
lected here, which you may meet
with in any *Galenist*.

§. 12.

Paracelsus saith, that the Pesti-
lence is a Disease that takes its
Original from the Stars, whose Ma-
lignant Raies he accuseth; therefore
every Physician should know what
is the true cause and rise of every
Disease. If it proceedeth from ill
Diet, bad Drink, Herbs, or Fruits, it
is then to be cured by some secret
application of Herbs, and Roots.
But if it proceedeth from Mine-
rals, or Metals, it must be cured
by some secret preparation of
them; For here he admits not of

the use of Simples or any preparation of Vegetables. So where the disease proceeds from the Influence of the Heavens, the secret virtues of Metals, & Minerals signify nothing, but the Cure is to be wrought by heavenly Influence Astronomically applyed, as he teacheth *lib. de Persicaria*, and thence takes occasion to commend several Secrets.

§. 13.

HElmont, who will have the Plague to be a most acute, most violent, and quick Fever, asserts it may be cured without Bleeding or Purging, with the use only of Sudorificks, and drinking of pure Wine. He boldly adviseth the use of Treacle in Wine, or *Aqua Vitæ*. Against the Infection, he Prescribeth the use of Sudorificks mixt with Antidotes. Therefore according to him all the Hope of a successful Cure, consists in the due Extermination of the Poyson by a due Sweat.

As to Preservatives, care is to be taken, that all fear, and Terror be banished from the Spirit of the *Archæus*: for which end pure Wine taken to a degree of Mirth is very proper, because it in a manner stifles the force of Imagination for a while: for no Man is poor or wants any thing so long as he is elevated with Wine; but it is better for Prevention, than for Cure.

However he supposeth that what may preserve from the Plague, may also cure it. One sort of Curative Remedy is that which annihilates the Pestilential Poyson, another is that which expels the Subject with the Poyson, and a third is that which takes away the Causes that dispose the Body

towards it. As for the Preservative, there is nothing more proper than that usual way of purifying the Air according to *Hippocrates*, as in an Epidemical Plague, that the Pestilential Poyson in the Air being thus killed, the Air it self brought to a healthy Constitution, the nourishing within us may not any way be corrupted. But when that Scurvy and Malignant Poyson is conceived into the Body, and were fixed in the *Archæus*, the Author saith, That those Medicines which are purely Preservative avail but little, by reason of the Activity of the Poyson. Therefore in the cure of this Disease care be taken chiefly, that the Body be actually hot, and Pores continually open, and Mind always cheerful and merry. For all sadness, saith he, is rather to be avoided, not only as it related to fear, but as it immediately produceth Corruption about the Orifice of the Stomach, which is the cause of all Scurvy. Therefore all sad, and Melancholy Objects are extremely to be avoided, as also all Melancholy courses. Amongst absolute Preservatives, according to the opinion of our Author, Charms and Amulets are best. Lastly Sudorificks expel the Plague: for they entice forth the sad and Terrible *Archæus*, which otherwise retires inwardly as to a Tower, and raise there sadness, sighs and malignant heaviness. He saith also that all Sudorificks are in a manner of the same Virtue, and differ only in degrees. He prescribes also among these the drink called *Hippocras*, with Ginger and bla-

berries, as grateful to the Stomach. Alexitericks are to be given in strong Wine, and just after Eating, not to provoke Sweat, but to keep open the Pores. He commendeth small, and light Meals, he saith, that in all Fevers, especially in a Plague, there is an Inclination, therefore instead of allowing much Food, he adviseth a draught of pure Wine.

As for Women with Child, in the first, and those that have their Menstruation, with whom this Plague is always most severe; because the *Archæus* of the Womb is in great disorder, and even overwhelmed with sadness, he adviseth the Womb be comforted with Amber, or with Amber dissolved in the best Spirit of Wine, and be got, or with the Fume of the hard knots that grow on the Legs, let through a Sieve. For Carbuncles and *Bubo's*, he adviseth a Toad prepared after the same way, and a Sapphire Stone. Some say that if a Sapphire or a Jacinth be applyed to the place that is griev'd one quarter of an hour, so that the place may feel the force of its Rayes, it will grow visible in an hours time, which is a visible sign of the Plague; if otherwise, the Patient is free from the Plague. *Helmont* also commendeth Amber rubbed on the Wrists, as also a Jacinth or Sapphire used the same way.

§ 14.

Willis saith, That in the Plague, and other contagious Fevers, Preservatives, as Remedies, are equally to be expected: As for the first, he commendeth a good Diet, and

with *Helmont* Mirth, and Cheerfulness, because they fortify the *Archæus*. And in those that are Plethorick he allows of Bleeding, especially if they are used to it; for the more peaceably, and softly the Blood moveth in its Circulation, the longer 'tis before it is infected.

He believeth also that Amulets, tyed about the Neck or Wrists, have great Efficacy, and that from the mutual Sympathy of the *Effluvia*'s on both sides. Hence also he commends those Amulets which are made of Arsenick, Quick-silver, and powder of Toads, and other poysonous things.

As to Pharmacy in this case, he is for carrying off the Malignant Matter by gentle Purges, next for fortifying the Body or Spirits with Antidotes taken every day.

In the cure of this most violent Disease, our Author very seldom or never admits of Bleeding, because the stock of Blood being too much Exhausted, sweating is not so easily promoted. Therefore instead of it, he commends Scarifications, and Vesicatories; against *Bubo's*, Carbuncles, and Ulcers coming from them, he adviseth Cataplasms, Fomentations, Plaisters, and Anointings, and many other external Applications, in which he usually mixeth some poysonous things, as the Oyl, and Balsam of Arsenick.

As for our Author's Medicines in the cure of the Plague, they are either such as evacuate, and so are design'd to carry off the sharp *Serum* of the Blood, together with the poysonous Particles that attend it, or else they are Antidotes; for those Medicines which are more general

general in their Evacuation, and that by stirring up the Blood, prevent Coagulation, preserve the Heart (the Cittadel of life) and keep the Enemy at a distance, by driving those corrupt Humors, and poysonous Ferments from the Center to the Circumference. All such Medicines, whether Purging, or Sudorifick, should consist of such Particles, as are rather of the nature of those infectious Particles that attend the Contagion, than of those that compose the Mass of Blood; for he is of opinion, that from this mutual likeness, the infectious Matter is the sooner carried off. Hence he recommends all Purges, Vomits and Sudorificks, which are prepared of Mercury, Antimony, Gold, Sulphur, Vitriol and Arsenick, which seeing they are not overcome by our natural heat, are admirable Remedies against the Pestilential Poyson.

Alexetericks, as Rue, and *Scordium*, of Compounds, as Treacle, Mithridate, and *Diascordium*, inspire the blood and Humours with a new Ferment, and by keeping up a gentle and even Motion, prevent Coagulation or Putrefaction, dissipate the poysonous Particles, when they begin to croud together, and prevent their coming to a head, being as it were a constant guard to the Blood and Spirits against those Malignant Impressions. This Author therefore would have the Patient first Purge or Vomit, then Sweat, which he advises may be frequently repeated, with the constant use of Alexipharmacks intermixt, that with the free eruption of *Bubo's*, or Carbuncles, all the Malignant Poyson may be expelled. Therefore the whole busi-

ness lies in expelling the Pestilential Matter, and in hindring its return.

As to Malignant Fevers, there are but two things to be considered according to our Author, (viz) the Malignity, and the Fever, or Intemperature. Now the Remedies that cure the last, as Purging, Bleeding, and Cooling Medicines, encrease the Malignity, and make the Poyson spread further; as Antidotes, and Sudorificks, which resist Malignity, on the other hand encrease the Fever. So the Principal use of both is all that is to be considered here.

§. 15.

Sylvius, who placeth the source of the Plague in a certain vitious sharp and volatil Salt, recommends Medicines Preservative, and Curative. Whilst he visited those who were sick of this disease in Amsterdam, he armed himself with nothing else but a bit of Beef soaked in a Spoonful of Vinegar: but when he left the use of Vinegar, he always felt some pain in his Head at his entrance into any House that was infected. Therefore he commends all Acids, and condemns Spirituous Remedies as the Spirit of Wine, Treacle, &c. but for spirit of Salt, Sulphur or Vitriol, he commends them highly: As he doth also Fruits, as Citrons, Limons, &c. granates, English Currans, &c. who likened acids, he allows to temper them with the Spirit of Wine. So also he commends the following Composition.

of the Conserve of Roses two
Ounces, Flowers of Marigold,
Maiden-hair, Borage, Bugloss,
Violets of each half an Ounce,
Spirit of Vitriol enough to give
a pleasant tast, of which let a
Man of a middle Age take fasting
in the Morning, the bigness of a
Walnut, a young Man less, and
an old Man still less.

He commends also Syrups, and
Jellies made of acid Juices, as
Tartar, Cream of Tartar, or
Vitriolated, in Broth or

for preventing the Plague, he
does not much esteem of Amulets
or Charms, because it cannot be
illustrated how they act.
It is that he Laughs at the
use of crude Mercury about
the Neck in a Goose-quil, for the
taking off the Pestilent Mat-

ter to the Cure, seeing that the
Pestilential Poyson very often en-
ters through the Pores of the Bo-
dy, and is for driving it out the
way by Sudorificks. But
if it is taken in by breathing,
or mixing with the Spittle, cor-
rupting it, which being swallowed,
causes a certain Nauseousness in
the Stomach, then he very fitly
prescribes an Antimonial Vomit:
When this Malignant Poyson is
removed as to corrupt or destroy
the parts that lie in its way, he
prescribes Medicines, that power-
fully fix and temper Sharpness, or
Acrimony, as fixed Sulphur (to
the Metalline, or Mineral. By
these Medicines also he will have
the Cholera that is sharpened by
the Pestilential Poyson to be fixed.

He commends also all Acids, in
respect they recover the Acid Juice
that is dull'd and corrupted by
the Pestilential Poyson, and in
some degree correct and mend the
Texture of the Blood. For Su-
dorificks he commends above o-
thers, *Theriaca Andromachi*,
Mithridate, *Diafscordium*, *Orvie-*
tan, Treacle-Waters prepared with
the Spirit of Wine, or destilled Vi-
negar. To these he addeth also
some Preparations of Antimony,
as *Antimonium Diaphoreticum*,
Bezoardicum Mineral, as well the
Simple, as the Solar, Lunar, &c.
the golden Diaphoretick Sulphur,
fixed Flowers of Antimony. As
for Medicines that are more sim-
ple, he commendeth in general
Fat or Sealed Earths, Bole Arme-
nick, *Terra Lemnia*, *Silefiaca*,
Turcica. Amongst Vegetables he
commends the roots of Butter-bur,
Contrayerva, *Angelica*, Tormen-
til, Zedoary, the Leaves of *Car-*
duus Benedictus, *Scordium*, Cen-
taury the less, Scabious; for
Woods, *Guajacum*, Juniper, Box,
Oak, Sassafras; Seeds of Elder,
and dwarf-Elder; and also a Rob
made of Juniper-berries. Reme-
dies from Animals in this case, are
the Bezoar-Stone, a Stone found in
a Hogs Belly, and such like; as
also all Horns, Bones, and Claws,
and chiefly volatil Salts, and
Oyls drawn from them, which
are Sudorifick in a high degree.

To temper and moderate the
Volatility and Lixivious Acrimo-
ny of this Pestilential Poyson, he
commends Tartar above all things,
and most of all the destilled Oyl
thereof; so also for the fixing of
volatil Salts he praiseth Salt-peter.
For by this Salt, Arsenick, Orpi-
mnet,

ment, Antimony, and such things as consist of a volatil Salt are fixed: yet above the rest he commends Mineral Sulphur, artificially fix'd and prepared out of any Subject, which he calleth a most admirable Medicine in the Plague, or any other severe Distemper, on which he can surely rely. He commendeth all Acid Spirits, especially the more Simple, or those that are a little sweet'ned with the Spirit of Wine. From Animals he hath certain volatil, oily Salts, or Oyls destilled from Horns, Bones, or Hoofs. Amongst Acids he reckons sowre Milk, Butter-Milk, Whey that is sowrish, juices of Sorrel, Wood-forrel, the greater House-leek, Barberries, Citrons, Oranges, Pomgranates pressed out with unripe Grapes. Amongst Minerals, he commends all Acid Spirits, destilled from Salt, Nitre, Alum, Sulphur, or Vitriol. *Sylvius* says that three sorts of Medicines are sufficient in the Plague; first Vomitories, as often as occasion requires: secondly Sudorificks, but such as abound with volatil Salt, for the moderating or taking away the Acrimony of the Pestilential Poyson. Thirdly Acids, and among these he prefers the Spirit of Nitre, as endued with a fixing quality, but for security he adviseth mixing it with watery Medicines.

Therefore in the cure of the Plague, our Author asserts, that a Vomit of Antimony may be safely administred, that may be at the same time also Sudorifick, especially in the beginning, and if there be a Nauseousness, and if the Patient be strong: after Sweating he adviseth, that the sick Person be

refreshed with Acids, and Com Mixtures: but so long as any of the Plague remaineth, Medicines that are good to fix volatil Salt, or to correct the Acid, to restore the acid, are to be left the Poyson neglected, lest to it self should gain Forces, and on a suddain oppress the Patient,

According to our Author Pestilential *Bubo's* are to be cussed, and if that cannot be, must be brought to Maturity Suppuration, after this, he says they are to be opened, cleaned, and at last consolidated, according to the Medicines according to advice, Treacle, or Mithridate, which end he commends the destilled Oyl of Harts-horn, and other Medicines that abound with oily volatil Salt.

He hath observed that *Unguentum Martiatum* with Treacle hath been used in discharging great success, as also *Emplastrum cum gummi compositum*. When the pains are very urgent, it is not for Scarifying the *Bubo's* soon, much less for using Vesicaries, or Cupping-glasses. But they are great, and burning, he adviseth Cupping, and Scarifying, but never Vesicatories.

So soon as ever the *Bubo's* suppurated, he is immediately opening them with a Pen-knife, Lancet: to which when opened he administers *Balsamum Sulphuris Amisatum*, and mixed with Turpentine, together with *Unguentum Basilicon* and Treacle, all this with great success, for the *Bubo* is soon cleansed. When an Escar over it, he uses *Emplastrum Diapompholigos*,

the encrease of the Car-
as also a Mortification in
neighbouring parts, he advis-
the affected part be anoin-
and down with the Butter
mony, or *Magnes Arsenica-*
and that the separated parts
with the anisated Bal-
Sulphur, together with a
of *Unguentum Tetra-*
and *Basilicon*.

prescribeth the same Me-
in Malignant Fevers; for he
that the volatil Salt sharp-
which is the cause of the Ma-
is mended and corrected
same Medicines, (to wit)
ones, mixt with some
some earthy substance, in
spect he allows of *Terra*
all mineral and metallick
well and truly prepared,

Antimony, &c. to this
he useth Treacle and *Di-*
and so to correct the
salt, he useth all volatil,
Oily Salts. Here also
ricks are convenient, in-
they drive the Enemy
Doors. To this end he
the following Prescrip-

old Treacle two Drachms,
Antimonium Diaphoreticum one
Syrup of *Carduus Be-*
two Ounces, the pro-
Black Water one Ounce,
mon half an Ounce, *Scal-*
two Ounces. Mix them.
The Patient take the fourth,
part of this, and dis-
himself to Sweat, then
an hour after let him take
two Spoonfuls more, and
all he is in a gentle

In the mean while if he is very
thirsty, and his Tongue dry, he
adviseeth him to take a little Broth,
with a little Limon or Orange
juice, which will not only promote
sweating, but also correct the Acri-
mony of the Salt. He seldom or
never adviseeth Vomits here, unless
when any thing of that Salt sticks
in the Stomach, or Guts, then he
alloweth the milder Antimonial
ones. He adviseeth the frequent use
of *Antimonium Diaphoreticum*,
and *Bezoardicum*, with the inter-
mixture of Acids, to recover the
natural Consistency of the Blood,
for which Pomgranates, Quinces,
Oranges, and Juice of sowre Grapes
are very good.

§. 16.

NOW let us propose the cure
of this Disease according to
our Own Indications. There are
two things that are chiefly to be
considered in the cure of Malignant,
and Pestilential Fevers (to wit)
the *Intemperies*, or Indisposition,
or the Malignity; one is cured by
Alteratives, the other by Anti-
dotes, yet neither without re-
gard had to the Symptoms that oc-
cur.

The Remedies are Chirurgical,
Pharmaceutical, or Dietetical: As
to the first, Bleeding comes first
to be considered, which is whol-
ly to be omitted in a *Malignant*
Fever, because it renders the Blood
more sharp, and fluid; which yet
Sydenham both in the *Plague* and
Malignant Fevers allows of. Here
also Vescicatories are to be consid-
ered, which we have known suc-
cessfully used to the Feet, and
Wrists. And tho by some they
be

be called in question, yet in this case we rather trust to our own experience, as also that of other more famous Men, as, *Horstius*, *Riverius*, *Haferus*, and others. We allow neither of Purges, nor Vomits, and whatsoever others suggest to the contrary, we have experience on our sides, without any contradiction of Reason. Vomits will do no good unless immediately at the beginning when the Stomach is full. Glysters also I do not much approve of. In time of Infection there must be great care of Eating before taking an Antidote, for I have known several escape of the Plague, who before either Sleeping, or Eating have taken an Alexipharmack; on the other side, several have dyed, who have slept or Eat before the use of any Antidote, in spite of the stoutest Remedies that have been Administred afterwards.

But nothing in this case answers your Sudorifick Antidotes, yet in respect of the Fever, the hotter sort are not to be used, which if they do any good, it is by chance, to wit, by the Benefit of Perspiration; for the poysonous Particles being grown sharp, and troublesome, are hereby thrown forth. Therefore the first thing we do, is to set upon the Malignity, which is conquered by the more fixed sort of Bezoardicks; nor do we tarry for that Concoction which *Hippocrates* speaks of. The milder Antidotes we use here, are the Powders prepared of *Antimonium Diaphoreticum*, *Minera solaris*, *lunaris*, Metalline Earths, to which we always add a little Camphore. The best compound Powders, are the *Hungarian Pow-*

der, and the red *Saxon powder*, as also the Bezoardick powder *Sennertus*, as also others, as of *Claudius Benedictus*, Worm-worm, Rue, Nitrum Antimoniatum, Saphire stone, which however do not rely on alone. Here those Antidotes are proper, which are commonly said to resist infection, as *Theriaca Antidoti*, *Damocrates's Mithridate*, *Fracastorius's Diacordium*, Celestial Treacle, Citron-Treacle. All Medicines made of Sulphur Salt, Aloes, and Myrrh are convenient; as also all viperous Medicines. But the volatil Salt ofipers ought to be fixed, and inscribed so; it is fixed by the spirit of Vitriol. Such a Remedy as this that follows may be used.

Take of the Treacle of *Andreas* a Scruple, Powder of Calves claws six Grains, of Saffron three Grains, *Carduus-water* Ounces, *Sylvius's Prophylactic* water half an Ounce, *Syrupus Liberans* three Drachms. Mix it, and give it.

That English powder of Calves claws, with some passeth for a great Secret, which is as follows.

Take of prepared Pearl, Opals, eyes, red Coral, the whitest Amber, Harts-horn, the Eastern zoar-stone of each half Ounce, of the powder of black Tips of Crabs claws the Weight of all the rest.

Let the Powder be made according to Art, which may be

Gelly of Vipers, or little Balls thereof, carefully dry'd and for Use. Amber Medicines Cinnabar are good in this which there is a gentle Sum- mer virtue. The following drink

native Cinnabar, Harts-horn, of Sulphur, the back of a Serpent of each a Scruple. Mix them.

Cinnabar of Antimony few Grains of *Magister*. is an excellent Remedy, it given, even to those that are with the Bezoar-Stone, *Pannonicus*. But if should happen, as it does in these Pestilential Fevers, with Dr. Sydenham for deferring or not administering any Medicine, till even very Weight of the Cloths begins to Sweat. For the Morbifick matter ad- towards the *Superficies* of the Flux of the Belly, Vomiting, caused by those turned inward, and falling the Stomach and Guts, cease on accord; so that let the be never so discomposed it afterwards retaineth the, and produceth those according to your desire, Let the following be given often at several

Myrrh, Root of Zedo- the Bark of Citron of each an Ounce, Cinnabar of An- a Scruple, Camphore a Scruple, Oyl of Amber, of each a drop. Mix

them into a Powder. The Dose is from a Scruple to half a Drachm. Or,

Take *Unicornu fossil.* a Drachm, the Magistery of Lead a Scruple, of Myrrh a Scruple, Camphore five Grains. Divide them into two equal parts; and give it with the Prophylactick-water of *Sylvius*, which may be repeated in six or eight hours, though a Sweat doth not always follow, till it be manifest that the Enemy is beaten, and Nature remains Victorious.

In the mean while let the Patient be refresh'd with a slice of Citron a little Sugar'd, and let his Broths be well season'd with Acids; for they befriend the Blood, and powerfully resist Poyson, defending the Animal and Vital Spirits, from all Assaults. Great care is to be taken always of the worser Symptoms, especially a Flux or Looseness; therefore to kill two Birds with one Stone, Bezoardicks are to be mixed with such Medicines as strengthen the Bowels and Entrails: so you will answer both Intentions. Let the following Powder therefore be given, or such like.

Take of *Terra Sigillata*, *Gasccon's* Powder of each a Scruple. Mix them for one Dose. Or,

Take of the *Diascordium* of *Fracastorius* a Drachm, German-der-water two Ounces and a half, *Species Hyacinthi* a Scruple, Syrup of Fumitory half an Ounce. Mix it, and give it.

These

These and such like are to be given as oft as there is occasion, for provoking of Sweat. So also care is to be taken of the strength of the Patient, for which Intention the following Prescription is good.

Take of the Water of the whole Citron, *Scordium*, black Cheries of each two Ounces, of the cool Cordial-water of *Hercules Saxonie* half an Ounce, prepared Pearl a Drachm and a half, Harts-horn burnt and prepared two Drachms, Crystal of Sugar enough to season it, or render it grateful. Mix it.

A Mucilage of Quince-seeds corrects the dryness of the Tongue, as also the Gelly of Harts-horn, likewise the red Water for the Mouth, with which it should be often washed. Against excessive Watchings, Almond Emulsions are very good, as also Oyntments, and Plasters applied to the Temples, and Wrists.

For Weakness or Fainting Fits, the usual Pearl-water is very proper, and also the following Epithem applied to the Heart, and Wrists.

Take of the Cordial Water *pro Epithem*. Rose-water of each an Ounce, Carbuncle half an Ounce, the Spirit of the Rind of Citron three Drachms, Bezoardick Vinegar distilled two Drachms. Mix 'em, and give it.

These things premised, let us

now treat of the Cure of Plague or Pestilence, that is a most and horrible Disease, for which we think all those things mentioned in the cure of Malignant Fevers to be very proper, that what is destructive in one case is so in the other. Bleeds therefore, and Purges, Vomits, Glysters, as also spirituous, hotter Cordials we reject, and not much approve of Alexitericks, but we choose out some gentle Alexetericks Bezoardicks. Yet before we come to the Cure of this Disease, we say something of the way to prevent it, and preserve the Body from it, which consists in shunning infected Air, and in having a cheerful Mind, which if we cannot let us correct the Air, and our Bodies against the Effects well as we can. Nothing clears the Air so much as clear Fires, the Wood of Juniper, or Pitch-Barrels; and amongst Smigations, Brimstone, and especially Bezoardick Vinegars are good. Thus in *Hippocrates's* the Plague raging through *Greece*, was kept off by Purges and Fires. Therefore let the Air be clear from all Stinks, and let the Fire be made in every House of Smigations of Brimstone, and powder, as was mentioned before. A courageous and quiet Mind is the best Preservative; hence the *Turks* with more than Stoick Philosophy take no notice of the Plague, do they avoid the Company of those that are infected.

As for Amulets or Charms, in this case we are for those that are prepared of Toads, out of their Eyes and Nostrils of which,

there creep certain Worms, Helmont faith, are a good Remedy against the Plague. In which the excellent prepared certain Trochiscs, which many have found very safe and efficacious. Some use Arsenick, others Mercury, yet in the Plague at London, Dr. Hodges. prepared safer of Native As, and the Root of Meadow Sweet. As to those Charms some call *Talisman*, I leave to the Astrologers. Yet this kind of Charms, That in the year 1679, at Dresden, they were found to have no force nor Efficacy, many, not without Reason, begin to doubt of their Efficacy of Operation. Now I thought to consider Inward Meds, amongst which strong Moderately taken hath the same, by which Remedy the famous Diemerbroeck preserved himself in the Plague at Nimegue, which the famous Waldsinger Physician and Publick Lecturer at Marburg, hath tried himself, who when for several years visited those that were infected with the Plague, took always two Spoonfuls of Wine fasting; and this Remedy alone, and Assistance escap'd the Contagion. Thus also Sylvius with a strong Gold-Vinegar, and a bit of Pepper preserv'd himself. There are many other things which deserve Consideration in this case, as Aniseeds, Cardus, Carline Thistle, &c. which is called from Charles the first Emperour of the Romans, of that Name, whose Arms were preserved from the Plague

by the use of this Root, the Virtue of which an Angel taught them; from whence to this very Day it is said to preserve against Contagion, and therefore it's good when chewed in the Mouth; the Root of Matterwort also, Galangal, Citron peel, Cinnamon, Myrrh, &c. are well esteem'd; but let those that use them take care they swallow not those Powders when chewed, since it is most certain, that the Infection insinuates it self into them: therefore in the Plague-time the Spittle ought never to be swallowed. There is nothing fortifieth the Spirits so much against this most fierce and cruel Disease, as the use of Bezoardicks, whose number by the diligence of Physicians is well encreased, amongst which all those that are composed of Treacle, are excellent, especially *Theriaca Cœlestis*, *Theriaca Camphorata*; here all Odoriferous things do good also; thus we see Flies, and other Insects are driven away with the smell of the Spirit or Oyl of Turpentine. Others extremely commend Diaphoretick Gold, Oyl of Camphore, Dr. Michael's Bezoardick Tincture, the nitrated Tincture of Sulphur, the Essence of Vipers; others commend other things. Thus a certain Apothecary for Lucre's sake went into the most infectious places, and visited those that were Sick courageously, preserving himself free from Contagion by the Spirit of Urine. *Myrsich's Tinctura Vita*, is an admirable Preservative. But who, I pray, shall or can reckon up all things used in this case?

Chirurgery affordeth us a more excellent and noble Amulet in the

Use of Issues; these truly according to mine, and others experience have done great things, nor have Veficatories done less good, tho the use of them is not much allowed in the Flux of the Hæmorrhoids, the monthly Courses, nor to those that are with Child, and very weak.

Now for the Cure it self, where in the first place, as we said before, we exclude Bleeding, which some at *Erfurt*, during the Plague, celebrated to the great hazard of the Patient's Life. He that desires Witnesses in this case, let him Consult *Pareus*, *Massa*, *Andernacus*, *Fonsæca*, *Forestus*; amongst the Moderns, *Paul de Sorbait*, *Waldsmidius* and others; for it's certain, that by Bleeding the Fermentation of the Blood is encreased, to the destruction of the Patient; wherefore I very much wonder the famous *English* Practitioner, Dr. *Sydenham*, hath approved of Bleeding in this case, as well by reasons, as experience.

Upon the same Account, we reject Scarifications also.

These things premised, you are to know, that as soon as the fountain of Life is assaulted by this Malignant Enemy, it is necessary to bring immediate assistance to the Animal Spirits. For this most acute Disease destroyeth like the flying of a Dart, unless prevented by immediate and present Remedies. The Signs therefore of Contagion appearing, the whole Cure depends on the immediate use of Antidotes, before the Poyson hath perverted the whole Mass of Blood, and Coagulated it like Whey. For when once the Animal Spirits, and the Region or Cittadel of life are pos-

sessed by this dreadful Enemy, human helps are in a manner Here, were it not too tedious could produce a World of Beldicks. Fossil Unicorn, in reference hath an Astringent Force with a Bezoardick Virtue, and it also imbibes the caustick stopping Looseness, Dysenteries, Convulsions, and other Symptoms in the Plague, as *Francis* in his Treatise of the Plague, saith is much commended. The Dose is from half a Scruple to a Scruple, which Virtues, as I believe, *Lapis Stellæ* hath also the Earth of *Lemnos*, Sealed Earths. Thus Bezoardick *Saturninum* is accounted of great Virtue, whose description you may see in *Hoffman* in his *Clavis* *Mercuriana* delivers of Antimonick Sulphureous, as also Camphor, Cinnabarine, Succinated, Balsamicks; wherefore several Prescriptions are to be seen of this nature. The best are those the late *low*, which the famous *Ettrich* has had great experience (to wit) the Oyl of Amber distilled from Nine Grains of twenty in Germander-water, the Prophylactick of *Sylvius* *fius*'s Antipestilential Oyl, is prepared of the Oyl of Camphore, &c. *Regler's* Camphorated Electuary is praised by all, also, by reason of the virtues it hath. You have here the Prescription, but something corrected.

Take sweet Almonds husked, Ounce, beat them in a Mortar, add an Ounce of half of Camphore, white Candy two Ounces, Powder of Ginger half an Ounce, Sc-

Root an Ounce and a half,
Snake-weed an Ounce,
three Drachms,
two Drachms, red
prepared two Ounces,
Pearl a Drachm, true
half a Drachm. Bone
Heart half a Drachm,
Treacle equal to
weight of all. Make an
Electuary.

Preserving Powder is as fol-

Mantuan's
of each two Drachms,
Hyacinthi of
a Drachm, Root of Vir-
Snake-weed and Cam-
of each a Drachm and a
Flowers of Sulphur half
Antimonium Dia-
micum a Drachm. Mix
to a Powder. The Dose
half a Drachm to a

much esteem in this case
of Animals, Mi-
and Antimonials, especi-
volatil Salts we pre-
all other, *Liquor Cor-*
Succinatus, and the
Balsam given to twen-
or more. All Acids
with a volatil Sulphu-
Principle are good here,
do not only bridle the
sharp *Effluvia* of
spirits, and in a manner
fix their Motion, but by
prevent the weaken-
of the Mass
for this Reason also
Spirit of Vitriol is al-
useful; there are several
prepared of Emeralds
other Minerals. Thus the

stinking Spirit of Sulphur plen-
tifully expels those salty sweats
that flow from the Body in the
Plague, and other Malignant Fe-
vers, thereby preserving the Spi-
rits from all danger of the E-
nemy.

All Medicines prepared of the
Blood, and Stomach of a Stork
are praised in the Plague, by rea-
son of some Alexeterick Virtue
contained in them, because those
Birds feed upon Snakes and Vi-
pers. Medicines of Elecampane
and Valerian are the best in this
Case; therefore they are put into
the Composition of the Bezoar-
dick Tincture, which is used ve-
ry much in Malignant Fevers,
Plague, and other Diseases. The
following Alexipharmack Elixir is
not to be despised.

Take of the Spirit of Juniper-
berries prepared by Fermenta-
tion half a pound, Root of
Virginian Snake-weed, Valeri-
an of each two Ounces, Saf-
fron, Myrrh of each half an
Ounce. Extract the Essence
thereof, in which dissolve Oyl
of Amber, and Camphore. Mix
it for an Elixir. The Dose
is from Five Drops to Ten.
Or,

Take of the Rob of Juniper a
pound, *Flos Sulphuris* four
Ounces, white Ginger two
Ounces, Powder of Citron-peel,
Root of Virginian Snake-weed
of each half an Ounce, red
Myrrh an Ounce, Campore six
Ounces, Opium dissolved in
Vinegar two Drachms, Trea-
cle-Vinegar an Ounce and a
half. Mix it into an Electua-
ry, which will both preserve

Ggg 2 from

from the Plague, and cure it.

These are the more Noble Medicines, by the assistance of which the Enemy is to be destroyed.

Anoint the Region of the Heart and the Wrists, with the following Anti-pestilential, or such like Balsam.

Take of the Oyl of Amber Camphorated a Drachm, Rue, *Angelica*, Citron peel of each a Scruple. With the Oyl of Nutmeg make a Balsam of a just Consistency.

The following Plaister applied to the Heart, and Wrists, as well in other Malignant Diseases as in the Plague, they say, hath been tryed with great Success.

Take of Venice Turpentine an Ounce, melt it in a Copper Kettle, add to it twenty live great Spiders, work it up, and down with a wooden *Spatula*, till the Spiders appear white or greyish, and can scarce be discerned, then add of the Powder of Toads-flesh dryed half an Ounce, Crude Sulphur an Ounce, Savine two Drachms, *Matthioli's* Oyl of Scorpions a sufficient quantity. Stir them altogether with a wooden *Spatula*, till they be of a fit Consistency to make a Plaister of.

But it will be better, if you put in Tonic prepared after the *Irish Barber's* way.

It becometh needies to treat farther of the Symptoms of this Di-

sease, for it being rightly red, they vanish of their own cord.

But we give a general caution against the unseasonable use of Medicines, Hypnoticks, or any Medicines which may be taken away Thirst, Flux of the bowels, Hæmorrhagies, or Dysenteries, for thus the Motion of Nature will be hindred, to the irreparable prejudice of the Patient.

As for *Buboes*, Carbuncles, Spots, the most common Symptoms that attend the Plague, bringing the *Buboes* to Perfection and Maturity, there is no remedy comparable to Dr. *Hodges's* Plaister, or the Magnetick Plaister *Angelus Sala*. For this end, Marsh-mallows, Hens, especially live Snails, and dried Toads, may be applied to the *Buboes*, as also Geese, or Root of Virginian Snake-weed mixed with Treacle in form of a Cataplasm, for it draws out all the Poyson. Others commend Cupping, and Scarifying, yet it doth little benefit to the Patient; nay, this means the Pains are increased, the Symptoms exasperated, their Cure is hindred. Therefore the best and safest thing in this is the applying of Cataplasms made of Treacle, the Crum of White bread, Linseed, Elderflowers, Figs, Chamomil, Yellow Eggs, Saffron, and such like, mixed with Honey, or boyled in Milk, and applied to the *Buboes*. Antidotes may also be mix'd, that the Venom may be the better extirpated; Treacle with Onions roasted in Ashes; or such as are prepared with the Powder of Toads, Honey, and Bean Flower; or, of the Root of Marsh-Mallows, white Lilies, Co-

the five Emollient Herbs, Sca-
moneberry, Rue, &c.

If these things do no good,
safely apply Vescicatories,
cannot be sufficiently com-

Carbuncles are more dange-
rous than Buboës, so they are to be
treated with greater Diligence. And
of speed imaginable they are

opened, and their Caustick
must be corrected lest it
spread further. To which

besides Actual Cauteries,
Labor, and Potential ones,
they must be Vescicatories) I

and *Emplastrum Arsenicale*
anicum; and *Diemerbroeck's*
together with a Treacle
is worth all the rest in

hindring the Carbuncle from Gan-
grening. The Eschars are to be se-
parated with Digestives, after that
the Ulcer is to be plyed with Ab-
stergents, Digestives, Cleansers and
Defensatives, lest the Poyson either
go back or spread further; where-
upon very often great Pieces of
Flesh fall off, to which end in Ul-
cers I much esteem *Balsamum Sul-*
phuris Anisatum, or *Succinatum*,
or *Terebinthinatum*, Balsam of *Pe-*
ru. Some draw a Saphire Stone a-
bout the Swelling, and no Pus or
Poyson appears any more. For
healing it, we commend *Empla-*
strum Saturninum Mynsichti, mixt
with *Mercurius dulcis*, *Sticticum*
Crollii, *Oppodeldoch*, *Diapalma*,
and the like.

Ggg 3

CHAP.

C H A P. VI.

Of the Small Pox and Measles.

§. I.

WE, as well as *Willis*, place the Small Pox and Measles next to the Tribe of Pestilential and Malignant Fevers; which indeed are mixt Diseases, being both according and contrary to our Natures. As to their Original, they have their Seminary connate with our selves: And as to their Effects, they produce poysonous Symptoms, which usually occur in the Plague. And because the Small Pox usually invade all Mankind indifferently, we may upon very good Grounds suspect a common Cause, or Seminary, contracted in the Mothers Womb, and connate to every Man, which for some season lies buried in some solid Part, till having got an opportunity of breaking out, it bursts out of its lurking Hole, and being mixt with the Mass of Blood, it produces terrible Symptoms, and often-times Death: Thus we often dye, than are born, from the very Womb. I saw a Child born with the Small Pox, of a great Lady, wherewith the Mother had been afflicted and marked. Yea, you can scarce find one in a thousand, who all his Life long remains free.

We shall retain our old Method, and briefly touch upon the Etymology. The Small Pox are called *Variolæ*, either from *variare*, because they vary or alter the colour, or (which is more likely) from *vari*, Pimples, because they are like Pimples, tho usually they pass Pimples in Magnitude. *Italians* call the Measles, the *Plague*. Dictionary-Writers use the Word *Variolus* for the Small Pox, and call a Trout. We in this think the Word *Variolæ* should be taken in its most usual Signification, meaning by it those Exanthemata or Pimples, which by the *Crisis* break out in the Skin, suppurate, with a Malignant Fever, usually attended with the Symptoms. The *French* call it *La petite verole* or *Morbille*.

By the Measles, we mean red Spots, that break out without protuberance, and an itching of the Skin, generally with a Fever, yet are sooner dissolved, and without suppuration. The *French* call them *Rougeole*. *Martianus* calls them *Resaliæ*. Ancient Authors make no mention of the Small Pox: Wherefore Dr. Sydenham thinks, that Diseases have different Periods, according to those Cult, and hitherto unaccounted alterations.

ions, which happen in the Bo-
of the Earth, to wit, according
various Age and duration, just
were some Diseases for-
as the Leprosie, which are

Description.

THE Small Pox therefore are a
new sort of Disease, which are
to be *Sanious Pustules*, or
Abcesses, in the Skin espec-
that are thrust out into the
of the Body, like Lees from
Wine, by some common
breeding a disturbance in
heterogeneous Particles of the
of Blood, which till then
in the solid Parts, with a
Effervescence of the Blood,
ing as it were a critical
of Nature, rising with a
small Fever, a Cough, diffi-
of Breathing, want of Sleep,
in their Sleep, and a subse-
suppuration.

The Measles are red, dry, and
the spots arising in the same
from the same, but a little
volatil and sharp Matter;
times with more violent Sym-
and Fever, without Suppu-
which disappear by insensible
uration.

Difference.

THE Fevers, that attend these
Exanthemata, are not always
the same Nature, but as they de-
upon, so they are regulated
the Turgescence of the Matter,
disturbs the mixture of the
Sometimes more, sometimes
Wherefore all Small Pox are
Malignant, but respectively
be some that are benign.

The common People have gi-
ven them different Names from
the diversity of the Pustules and
their Matter.

I am not ignorant indeed, that
there is a question, whether the Small
Pox be always attended with a Fe-
ver, or no? And I know, that Au-
thors differ much in their Opinions
and that some of them would prove
by Arguments, drawn from Reason
and Experience, That the Small Pox
may break out without any Fe-
ver at all. But to confess ingenu-
ously what I think, I can see no
solid reason, whereby to establish
this opinion of theirs. Therefore
I am rather of the contrary opini-
on, that is, That there are no Small
Pox without a Fever. For since
the Small Pox are raised by way
of *Crisis*, and indeed by means of a
great Effervescence of Blood, which
cannot be done without distur-
bance, nor by consequent without
a Fever, any one may from thence
easily gather, That the Small Pox
cannot come without a Fever. I do
confess indeed, I have seen several
Children afflicted with the Small
Pox, who complained neither of a
feverish Heat, nor of any other
grievous Symptom, but played, and
eat and drank well, and were as
quiet, as if no ill had befallen
them. But here it must be obser-
ved, that this does not happen, but
in such as have a very few, be-
cause of the paucity of the matter, &
no violent Effervescence of Blood; or
perhaps they were not sick of the
true Small Pox. Thus I have seen
Children taken with an *Ephemera*
Fever, and a *Tertian Ague*, who have
play'd in the very Fit.

§. 2. Part affected.

NOW Order directs us to the search of the Subject. And the primary Adequate Subject in these Diseases, if we look on the *Exanthemata*, is the Skin, with its Cuticle, the shoar of the Microcosm, which are full of infinite Glands and Tubes; for there is the end of the Vessels, and there the fence of the Blood is observed, which receives all the refuse of the Blood and these *Exanthemata*. That part of the Skin therefore which is thinnest and hottest is most susceptible of these Sanious Pustules, which is the reason why they shew themselves more in the Back, than in the Face, Hands, and Feet. Therefore Physicians ought immediately to look on the Back, and that at the beginning, that they may be the more ascertained whether they be there. *Riverius de febr. pestilent. cap. 1. pag. 549.* reckons, that the Measles break out most in the Breast and Back, because these parts are the Emunctories of the Liver, to which he attributes the greatest share of Segregation: but he is out. Neither the Eyes, nor Ears; nay, and what is more, nor the Inner parts of the Body, to wit, the *Viscera*. Lungs, Diaphragm, Stomach, &c. are free from them. Which *Viscera* in such as dyed of the Small Pox, I have seen black and corrupt; yea, I have observed very black Small Pox as it were growing to the inner Membrane.

As to the Subject of the Cause, or of Inhesion, it is the Mass of Blood, and the *Lympha*; yea, all the solid Parts, wherein the Se-

minary lies buried, from whence these Sanious *Exanthemata*, are so fatal to many, having an occasion of breaking out: Nor do we exclude Glands.

§. 3. Diagnostick.

BUT that it may appear, the Patient ails, and when he is troubled with the Small or Measles, there is need of diagnostick Signs, on the knowledge whereof depends the Scrutiny the Causes, and the Foundation of Cure.

The general Signs therefore of Small Pox and the Measles, being imminent or to be feared, are, if and moist Winter have gone by, that is, if the wind have been Souly, which causes divers alterations in the Air. And hitherto it has been observation, that they rage most in the Spring time.

But the Signs of the Small Pox being in any one individual, to be attended are the essentially important ones. For at this Day here is the greatest error, that the Physicians do not at the beginning immediately know that the Small Pox are coming. Thus in the most powerful *Ferdinand the Fifth*, elected *Crowned King of the Romans*, who dyed of the Small Pox in the Month of *July, 1654.* the Physicians at first took it not for Small Pox, but for a Tertianague, because there were present *Deliria*, Tremblings, &c. therefore the cure succeeded ill. Wherefore Patients, if there be but the least suspicion of the Small Pox, must be asked, whether they have ever had this Disease, or if they

where those that had them
they have but cast their
them, and have been put
thereby. I have an Ex-
a Gentlewoman, the Mo-
three Children, who ha-
ever had the Small Pox, and
on a Child whose Face
much disfigured with them,
straightway went home, fell
them, and dyed within six

will appear by the following
that the Small Pox are ei-
pendent or at hand. First,
a gentle, sharp heat, with
Pulse, which heat holds
continually and equably
Intermission, or not with-
equable Exacerbation, with
Shivering, painful Lassi-
tude, Languishing, and
the Back and Loyns; on
the second or third day there is u-
a Fever attended with its
to wit, Thirst, Head-
aching, Vomiting, &c. The
Pox and Measles use general-
ly appear about the middle of
the second day, more follow on
the third, and the fourth they ap-
pear in full Body. And in this
not only the Face must be
looked on, but the whole Body
be laid naked, especially the
Face, in which a slow, yet a hap-
py eruption often happens, when
the Fever lessens from the Aug-
ment to its State. But it is best
to suspend ones judg-
ment till the third day.
Children and other People be-
fore they appear, there precede
Vomiting, and often-
times Tremblings, Convulsions and
Fits. And when they are
in the third day, the Patient is exceeding

Thirsty, and his Mouth is dry; nor
will plentiful drinking cool his hot
Viscera, in others it is gentler, and
sometimes it is wanting. In the
vital Faculty there is observed a
Palpitation of the Heart, difficul-
ty and quickness of Breathing, as
if it were Strangling, Anxieties a-
bout the Heart, Swooning, a quick
Pulse, which is often observed in the
temporal Arteries. In the Animal
Faculty there is Head-ach, want of
Sleep; sometimes in the beginning
unquiet Sleep, with Fright and *De-
lirium*, Convulsive Mo'ions with
Gnashing of Teeth, Lethargy, &c.
The Belly is, as it were on purpose,
Costive for three, four, five, or
sometimes more Days.

In the Skin there preceeds a
great Itching, with a pricking all
over the Body, the Eyes are red,
they water, and are dim, the
Nose itches, and they sneeze, and
bleed at Nose, the Ears tingle,
there is Hoarseness, & a dry Cough,
as also frequent Stretching and
Yawning. When they come out,
at first the Skin is a little rough and
moist, then on the third or fourth
day red Spots appear thick all o-
ver the Skin, most on the Back at
first, afterwards on the Belly and
Face; they encrease by degrees, and
breed *Sanies*, usually till about
the eleventh day, at which time,
the Matter being all driven out,
and gathered by degrees, they be-
gin to dry and turn into Scabs, and
Scales.

But the Measles, as they appear
sooner, so they decrease sooner, so
that the worst is over on the fourth,
sixth or ninth day. The *Menses*
come extraordinarily, they spit a-
bundance of ferous Matter all the
time of the Disease, and this Salivati-
on

on puts the Patients to much trouble; sometimes they spit Pus, wherefore this Disease often ends in a Consumption. Oftentimes the Nose bleeds; the Urine is Red, thin, and sometimes turbid; sometimes it is like theirs that are in Health, by the alteration of which several Piss-prophets boast how they can foretel when the Small Pox or Measles are coming. Yet all these Symptoms are not found in all Persons; but according to the greater or less quantity of the peccant Ferment, the Symptoms appear greater or less. In the Measles all the foresaid Symptoms appear more mild, than in the Small Pox; and at first they cannot easily be distinguished the one from the other, unless you will guess from common Contagion, whether it will prove the Small Pox or Measles.

§. 4. Cause.

IFever we are in the Dark, certainly it is in the knowledge of Causes, so that we may well say,

Felix qui rerum potuit cognoscere causas.

Hence it is most certainly true what *Hippocrates* says, *lib. de flatibus*: He that knows the cause of a Disease certainly, from things which are in the Body, having got the knowledge of Diseases by contraries, may easily give such things as will do good. For if in other things we are blind for want of Light, without all doubt here we are blinded in the Sun. Therefore first of all let us prosecute the

cause of our disease according to the Opinion and Principles of *Galenists*. *Galen's* Disciples hold, That these are no new Diseases, but that they arise from a very ancient Cause, the Impurities of Blood lurking in Children's bodies; which the *Arabians* hold. But *Hippocrates*, and the Opinion for Dogmatical Physicians, *Galen*, and other ancient Physicians make no mention of this. *Galen's* Followers hold, That this is the true cause of the Small Pox and Measles, because there is one in a thousand, who has it not before he dies. But they do not think, That these Measles Impurities remain in the Body substantially, for this reason, because by long tarrying they must corrupt and putrefy, but they say, that only some bad quality is imprinted on the parts of the *Fœtus*, which at length infects some part of the Humors, grows troublesome to Nature, and at length rising up drives infected parts to the Skin, which is the reason, why the Small Pox and Measles happen at ripeness of Years, and sometimes in old People. They make a two-fold Excretion in the Mass of Blood, the one thick, the other thin. From the thick they ridiculously hold, That the Small Pox are bred; from the thin, the Measles. And they hold, as well as the Moderns, hold, That the Expulsion of the Small Pox and Measles is made by an Ebullition of the Blood; and according to *Avicenna's* Doctrine, they make a Two-fold Ebullition, one purgative, another Corruptive. They call that *Perfective* or *Depurative*, in which only the impurer and clementer

corrupt parts of the Blood, and are purged out by the Menstruous Blood, so that the whole Mass may be left pure: and then the Small Pox safe, and cured without any Medicines. They call that *Corruption* in which not only the Extraneous parts of the Blood, but the pure Blood it self putrefies, whence they hold, that dangerous and mortal Small Pox arises, and they judge, that such an Corruption happens when they are in a corrupt and malignant Constitution of the Body, by which the Effervescence and malignant Putrefaction of the Blood are caused, whence they arise, and dangerous Small Pox is bred, which sometimes runs off the Plague, as the *Galenists* think. The *Galenists* think the Small Pox and Measles are acute Diseases, ending usually within fourteen days. The *Archeus*, and their Master *Ebescition* the Universal cause of the Small Pox, to be the Food, especially that wherewith Children are nourished in their Mother's

§. 5.

THE *Paracelsists* seek the Proximate Cause of the Small Pox in Sulphur, Salt and Mer-

§. 6.

Mont will not admit the forefaid Nourishment of the Menstruous Blood to be the Cause of the Small Pox, because the *Fetus* is nourished, it is

not Menstruous; but he says that they rather arise from Poyson, wherewith the Blood is infected, the Essence of which Poyson is not demonstrable *a priori*, but it resembles the property of Poyson by the Effects. He therefore thinks, That the cause of the Small Pox is an Exorbitance of the *Archeus*: for while the Ambient Air breaths some Endemial mischief, then the *Archeus*, who is quickly affected by what is Ambient, being impatient of a Malignant Air, breeds a peculiar Poyson in it self, which has such properties. He thinks this Poyson is bred about the Stomach.

§. 7.

Vetus de febribus cap. 15. does with the *Arabians* place the Proximate Cause in a Pollution of the Menstruous Blood at the time of Formation in the Mothers Womb. In which he holds, That a certain Ferment is bred, which being communicated to the Mass of Blood, gathers Vigor, and afterwards at set Periods procures a Turgescence and Superfluous excretion of Blood. For at the time of Conception, when the *Menstrua* are altogether stopt, he says, That much of this Ferment is bestowed on the *Fetus*, and its Heterogeneous Particles, as something foreign, is blended with the Humors and Mass of Blood, in which they lye entangled, till the Particles are moved by some evident Cause, then they Ferment with the Blood, and cause an Ebullition, and then a Coagulation, whereby most of the Symptoms in this Disease are produced.

duced. He says, that these Fermentative Seeds are sometimes few and mild, and so entangled with other little Bodies, that they cannot easily get loose; but he holds, that in others they are more and stronger, so that upon any slight occasion they are ripened into this Disease. Hence he judges, that some have the Small Pox in their Infancy, others later, and not till they are well in years: some are apt to take the Contagion, others converse with the Sick without danger.

And he assigns a Three-fold evident Cause which stirs up these fermentative Seeds; to wit, Contagion, Disposition, and immoderate Disturbance of Blood. That this Disease is produced by Contagion he proves from dayly Experience; because *Effluvia* continually go from the infected, which being received by other Bodies, do presently, like Poyson, ferment with the Blood, and so according to him they raise the latent Seeds of this disease, and things Homogeneous to them, and dispose them into an *Idea* of this disease. Secondly, a peculiar Disposition of the Air is able to produce the Small Pox; hence it often grows Popular, and rages over whole Countries and Cities. Hence also they come oftenest in Spring and Autumn, because, as he says, at these times especially divers Tumultuous Particles fly up and down the Air, which we draw in with our Breath, and thence divers Effervescencies of the Humors and Blood, and *Idea's* of diseases are raised. Thirdly, altho there were no Contagion, and no Malignant Constitution of Air did preceed, yet he has seen this disease produced by excessive Com-

motion and Disturbance of Blood and Humors, when no else has been sick in the Country. For who is there will not allow, That without previous Infection the occult may easily be brought into by excessive heat of the Blood.

He compares the manner their production to the wood of new Wine; as that that off the *Faces*, so the Effervescence of the Blood separates the unfitable Excrements. He says, Portions of the congealed Blood and Poyson break out about the fourth day; sometimes sooner, sometimes later; for the Coagulation of the Blood is not complete presently, but after some difference of time, wherein the Poyson separates it self and the Effervescence ments the Blood. First of small Portions of the tainted Blood, and few in number, like Fleas, rise in the Skin, then come more, and the gathering of coagulated Blood encreases, then they rise, those Spots which were at first red, as they gradually encrease grow White. If the extravasated Blood with the Poyson, by Heat and Stagnation turn into Pus, about the seventh day the white Spots dry into a Scab, that is, the thinner part of the Matter is evaporated the rest grows hard, which, when the Cuticle is cut through and broken, scale off. These and other very pretty things you may find concerning this disease in that Author.

§. 8.

denies that these *Exanthemata* have their Rise from Menstruous Blood, gathered in the Womb, during a being with Child, some being translated to the skin at length, sometimes sometimes later, severed from the rest of the Mass, and come to the Surface of the Body. The rather is of Opinion, that the Antecedent Cause of the Small Pox lies in the Glands of the Throat, oftentimes stirred up by the Procatactick Cause. And some make the proximate Cause of the Small Pox sometimes to a contagious Acrimony, as in a Gangrenous Spots, sometimes found in the Plague, sometimes black and blew; sometimes to an acid Acrimony, which, though he makes it contagious, yet there is no Morbidity or Blackness, but rather a whiteness; sometimes to a contagious Acrimony. He says moreover, that an ill affected Air is the Procatactick cause, the reason why the Small Pox is so often Epidemick. Some derive it also from peculiarities, and he holds, That fear is the Procatactick cause of the Small Pox, as the Plague and other grievous Diseases are to be produced by it.

§. 9.

SOME of the *Cartesians*, among whom is *Georgius Hornius in Arca Mosis p. 121.* derive the pedigree of the Small Pox from a Nameless Poyson, peculiar only to Mankind. *Mercurialis* proves by several reasons, That Small Pox come by paternal Inheritance from the Blood and Ichorous Matter that is Ebullient in Bodies through heat. He also derives the first growth of the Small Pox, from some Universal fault in the Air; but at this day he thinks the Transplantation is Hereditary. *Kircherus* refers the original of the Small Pox to the live Image of Death, or animated Putrefaction. *Langius* seems to be of his Opinion, who says, That the *Exanthemata* are nothing else but Receptacles and Lodgings of Vermineous *Effluvia*. But he divides the variety of Menstruous Reliques, or Impurities left by the Mother's Blood. *Fernelius* derives their Original from some Occult Influence of the Stars. *Dygby* seems to place the Cause of this Disease in the Blood, that remains in the Umbilical Vessels after the Birth. And there are some who hold it comes from the use of *Venus* after once Conception is over.

§. 10.

THAT therefore we may Extricate our selves out of these Meanders, we will give Our own Judgment, which when we have once proved, all other opinions will fall of themselves. We enquire not therefore, as several do, for the Proximate

Proximate Cause of the Small Pox in the Pollution of the Blood. For from the Ancient *Hypothesis* it is false, that the *Fœtus* is nourished in the Womb by the menstruous Blood of the Woman, and the Seed of the Man. And it appears also from the experience of the modern Anatomists, That Conception is not made just before the *Menfes*, nor when they are actually come, but when they are over, to the end that the Vessels of the Womb being then a little lax, the Mans Seed, or according to *Harvey*, the Genital Air of Mans Seed may pass through them to the Mass of Blood. Then in my Opinion the Womans Eggs do open, in other Mens fructify, and when they are so opened or fructified, they may be sent by the *Ductus Fallopi-ani* into the Cavity of the Womb.

Ettmuller's opinion is more probable, who holds, That there is a certain Principle implanted in us, in regard whereof no Man can escape the Small Pox; the cause of it he derives from the Nutritive Milk, sucked by Children, as well in as out of their Mother's Womb, in as much as this, after the manner of all things made of Milk, is apt to corrupt, and turn to an Acid, Saline Liquor, and this lies under a Viscidity a long time, yea, several years, in the Vessels and other places, which Acid after it has been hid for some time, at length, when occasion is given either by the Air, Contagion or Food, or any other Non-natural thing being extrinsically by the like ferment communicated to the Maternal Blood, raises pernicious Ferbrile Effervescencies. I admire how hitherto several learned Men could

be so solicitous about a Ferment bred in the Maternal Womb, either through some in the Menstruous Blood, or Milk, when nevertheless to seems, with deference to judgements, that this Disease as other Fevers do. For let us consider the frequency of a does not every one in a fall into it at one time or ther as well as into the Small And the reason, why the Pox seize Children more grown Persons, I am persuaded is this, Because Children not in the Womb, but when they out of it, are nourished Milk, whereby the frame of Blood is rendred weak, and coagulate, hence upon any sion given either by the Air tagion or Food, the Blood goes an alteration, hereupon fermentative Acid contains the volatil Salt of the Blood, till the Enemy, that that vitious Acid lodged in rum, be precipitated and ed by the Spirits, which is precipitated, is by means intercutaneous Glands success thrown up into Pultules, at length turns to Pus, and Skin, being eroded by the turns to a hard Crust, like That there is an Acid the testify which remain in one as long as one lives, and the lignant Ulcers likewise, spread far and near, and for corrode the Vessels of the and so produce a Consum according as the Acid is less Virulent. Let us that our Blood above all animals is best constituted

balsamick and ferous
 that partly through va-
 but especially through
 Milk and Flesh it gathers
 of Excrementitious
 Particles, that
 naked in it self,
 full of Pores, does
 transpire, which Tran-
 when it is hindred, especi-
 Southerly Air, it is ap-
 both other sorts of Fe-
 Exanthematical ones
 arise; and so the rea-
 thing is apparent, with-
 of the Nutritive Milk,
 Excrement contracted
 Womb. The Corrosi-
 bones in the Small Pox te-
 Corrosive Acid is pec-
 as I had a sad Spe-
 Limburgh of a poor
 Bones were more cor-
 the Small Pox, than ever
 ones by the Great. So
 corroding Acid we may
 corrosive Motions, and the
 Symptoms frequently
 the Small Pox: for it
 the Nerves, and raises
 and impetuous Motions,
 make a Concussion in
 Machine. But let this
 and, that by an Acid we
 mean every Acid that is
 in our Bodies, because
 a great Latitude; for
 imagine there is one in
 another in the Epilep-
 in Chronical diseases,
 the Measles and another in
 Small Pox; but they differ
 manner, so that one is
 another more volatil,
 another Specifick tast, con-
 this or the other thing,
 as well as others,

is inexplicable. Yet I suspect that
 the Small Pox come of a volatil
 Acido-Saline, as appears from the
 Contagion, which cannot be ex-
 pected from a fixt Acid.

Since Infants therefore both in
 regard of their Place and Food un-
 dergo a great change, it cannot
 otherwise be, but that some nota-
 ble alteration must be made in the
 Blood, which, since alone it is not
 always sufficient to disturb the mix-
 ture of the Blood, by reason of
 the dulness and weakness of the
 Ferment to make an Effervescence,
 lies quiet for a time wrapt up in
 kindly, ferous, balsamick, sul-
 phureous Particles, till it is stir-
 red up by the Air or some other
 occasional Causes. Wherefore,
 since the Seeds or Ferments of such
 diseases may lye harmlessly in peo-
 ples Bodies for a time, there is a
 question among Authors, but it
 is *de lana Caprina*, how the Seeds
 of Fevers, especially of Spotted
 ones, and of some others can lye
 hid; have we not our Blood from
 our Nativity so disposed, that up-
 on occasion given, it must under-
 go many Mutations, Coagulations,
 Fusions, &c. We deny not, that
 Poyson may lye hid under Visci-
 dity for a long time in the Body:
 For experience, and the Monuments
 of Physicians testify, that the Poy-
 son of a Mad Dog has lain hid for
 many years. And as much is e-
 vident from that preparation of a
 powder among the *French*, which
 they call *la Poudre de Succession*,
 which Poysons may lye a year and
 more in the Body, before they
 shew their Spite. I suspect it is
 Arsenick prepared after some pecu-
 liar manner, which afterwards re-
 covers its virtue again from the
 Air,

Air, as by the effect I proved lately in a Dog: And so Diaphoretick Antimony with Time acquires its Sting, as does *Mercury* given to Patients for the Venereal disease, or outwardly applyed, which I have observed lye in the Body for six years, and then re-assume its Malice; for it cast the Patient into an Epilepsy, and at last it killed him. Nay, the same Poyson given to several Persons does not kill them all at the same Moment; sometimes these fermentative Seeds abound and are strong in the Air, wherefore they did not formerly lye in the Blood: for the Seeds neither of the Plague nor of any other Malignant Fevers preexist in the Blood. Some are sooner, others later taken with the Small Pox, some are difficultly, others easily infected, according as the disposition of the Blood differs. When these Particles are put in Motion, Nature fearing a total dissolution, does with all her Ability drive out those volatil foreign Salts, that are mixt with the Sulphureous Ichorefcent Particles of the Blood, and cause all the disturbance to the *Superficies* of the Body, and so clarifies the Blood. Now in this Separation and Turgescence, while the Acid Particles of the *Serum* fight with the volatil, sanguineous ones, the mixture of the Blood must of necessity be hurt: Hence a Fever does generally or always attend our disease, for the more the Blood is disturbed, the more Malignant is the Fever. How the Blood is Turgescent, may be seen in *Willis*, and it is apparent from that Mechanical and Natural Depuration of a Vegetable Juice, that is, Wine.

We will explain a few symptoms, and we shall find them rally flow from one Force, namely, an Acido-Saline sharp, Corrosive ferment. It is parent from what has been said, That there is an Acid, and that it transforms it self to different Symptoms, according to the diversity of the parts, it is Predominant. When it falls on the Nervous kind and the branes of the Brain, then the fibres of the Nerves are Corrupted, hence come Head-aches, Sleep, Phrensies, the Epilepsy in the Back and other Symptoms. When it falls in the Mass of the intestines, it produces a disturbed mixture, several Febrile symptoms, a disordered Pulse, Irritation of the Heart, and Angina are produced. When it falls with the fermental Lymphatic Glands of the Stomach, it irritates the upper Orifice, and causes Squeamishness, and Vomiting. If it falls on the Fauces, it causes drought, and by consequent If on the *aspera Arteria*, it causes a Cough, Hoarseness, and other faults of the Organs of Respiration till it is thrown off by three ways of Evacuation; namely, the volatil parts of it by the Salivary Glands, where it turns into little Ulcers; the more fixt parts by the Kidneys in Turbidity of Urine, partly by the Guts in low stinking Stools.

The mediate Causes of the disease, are the Causes Natural and Non-natural; of which here we treat of Diet.

But before we proceed any further, Why does this Disease arise in such as are of Kin? We answer,

may happen without a
fault; for since Peo-
anguinity are usually
temper of Blood, and
Motion of Humors,
is it, when any oc-
cure, especially the Air,
Author of all Epide-
emics, so disposes them,
taken with the like di-

seize and kill abundance at the
same time, are more dangerous,
than when they seize here and
there one, for the greater the Ma-
lignity the more the Danger.

If many black and blew Spots a-
rise, especially in the middle of
the Small Pox, or between them,
they argue great Malignity, and
consequently danger. But when
the Symptoms are mild in appea-
rance, we must not thence conclude
about the Nature of this disease;
because there is often a Snake in
the Grass, and a secret Malignity.
Nor must a Physician be frightened,
if bad Symptoms appear at the
Beginning, to wit, Phrenzy, Con-
vulsions, Epilepsies, &c. because
the time before the *Crisis* is always
grievous: but if these Symptoms
exceed the bounds of Nature, they
portend death, or danger at least.
If after Eruption these grievous
Symptoms abate, there is good
hope: If the Fever return, and
Epileptick Fits come afterwards,
the Cure is Mortal. If the Febrile
heat abate not after the fourth day;
or when the Pimples come out,
if it abate not a little, there is dan-
ger. Also if the heat abate sooner
than it should, it is not able to ex-
pel the Heterogeneous taint from
the Blood, and then Men dye.
Therefore we must always be cau-
tious, and not give cooling Emul-
sions at the Beginning, be the
Thirst never so great. Otherwise
we kill the Patient. Neither must
Patients be kept too hot, for then
you stifle them.

Difficulty of Breathing and
Hoarseness, according to *Hippocra-
tes* 4. *Aph.* 50. is of ill Portent.
Want of Thirst, or of Appetite,
after the coming out of the Small

H h h

Pox

II. Diagnostick.

According to *Hippocrates* f. 2.
19. In an Acute Fe-
brile of Life and Death
together certain; since
an acute Fever attends
ambemata, I think we
be cautious about the Pre-
When the Small Pox and
have grown People, the
greater, than if they take
according to *Aph.* 39.
disease is more dangerous
in and Winter, than in
and Summer. Such to-
gether they have been de-
are in greatest Hazard;
worse for Fat people than
They are very dange-
Women with Child; ne-
we must consider the
of Nature in such: for I
know some Women who
born in them without
This may be a rea-
cause the Febrile Efferves-
not so long in them as
Continual and Acute Fe-
at abates upon their coming
wherefore the Mouths of
are not so much ope-
the Hemorrhage of the
contrary to Nature's in-
The Small Pox, which

Pox or Measles, argues danger. A Phrensy at the Beginning without Laughter, and not amending by Sleep, indecent lying naked, not knowing ones Friends, Trembling, Convulsions, Swooning, Grating ones Teeth, Want of Sleep, as they are bad Signs, so, as we have said, before and in the Eruption they are often harmless; but if they come after Eruption, we may boldly pronounce them Mortal. As to the Pustules, the sooner they come out, which is usually on the third or fourth day, the better, then they encrease successively till the eleventh day, and suppurate in Small Pox. On the contrary, if they come not out well, or if they strike in unseasonably; if they dye away presently, and the swelling abate immediately, without any abatement of the Symptoms and heat, all these things argue Malignity and Death.

The Flux of the *Menses* coming upon the Eruption of the Small Pox, is generally held to be dangerous; but I observed it in one of the Princesses of *Nassau* without any danger. Loosenesses also at the time of Eruption are generally reckoned bad; yet I have seen several escape in such a Looseness: However, black, bloody, green and stinking Stools, are reckoned bad by all Men. But in general, it is better to be Costive than Loose. If the Looseness give way to Treacle Bezoardicks, all may prove well.

A dry Cough is worse than when one raises something; thick Spittle is bad; a bloody one is not always bad. Plentiful bleeding at the Nose before, and at the coming out is good, and lessens the quan-

tity of the Small Pox. Eruptions Sweats are good, wasting ones are bad, according to *Crates 4. aph. 37*. Chilnelis of the cream Parts is bad also in the Pox, according to *7. aph. 1*. vivid, violet coloured, or Small Pox are worse than yellow, and denote greater lignity. So brown and black mixt with the Small Pox, a bad Sign. Distinct, round, ed Small Pox, and which out all at once, also soft and ones are good. The Small after the manner of acute are at the height in fourteen. And the reason why the are over sooner, usually on the seventh day, is the Volatility of Humors; but then they are attended with more grievous toms. The Small Pox are which affect the Inwards; which come Consumptions, Dysentery, Quinsies, Gangreen, Mortification: Sometimes the peccant matter is transmitted by Nature some Nerve or other, whence sometimes comes Blindness, Deafness, loss of Speech, as I lately observed in a Village near *Hanover*, called *Hockstat*, where a Girl of seven years became Dumb, without her Parents comfort, toward the latter end of Summer, recovered her Speech.

§. 12. Dietetick Care

NOW we come to the Dietetick consists in the due Regimen of the six Non-rals. The Air therefore must be moderately hot. Women therefore do ill, who, by heating Chibers too much, kill more than

over cold one must be
because oftentimes it hin-
ders Motion, by shutting
the Skin, so that the
Pox cannot come out.
Patients must not ex-
pose themselves in the Declension
to the cold Air, lest they
Some advise the cove-
ring with a red Cloth. O-
thers have a Sheep or a Goat
in the Chamber, according to
prax. l. 7. de variolis

and Drink Oat-meal
gruel, with Raisins, is
especially if it be sharpened
with Citron, which is a
this disease, Gelly of
is sweet and tart. For
sometimes only a Decocti-
on, with burnt Harts-
horn, is sufficient,
the following may be put

Flowers of Bugloss, Bor-
n-violets, Marigolds, Co-
lts, Panies each one hand-
ful, of Harts-horn half
pound, Gum-lacca two
pounds, Album Gracum half
pound, (this may be omitted
in Patients) a handful of
Powder, may be put e-
very day in Beer. Or, a
may be made of Co-
rsea-seed, Terra Sigillata,
Harts-horn Philosophically
red. Or, which is better,
into Small-beer, well
Tincture of Colum-
bines sharpened with Spirit of
Nitric, or Bezoartick
oil, or of Terra Catechu:
cannot well deny them
to quench their Thirst.

Flesh and Fish, salt, sharp, sweet
aromatick things, all horary
Fruits, New Wines and all man-
ner of Drink not well clarified,
must wholly be avoided; yet a
few Spoonfuls of red Wine may
be allowed.

Motion and Rest must be mo-
derate, but Rest is most eligi-
ble.

One must not go to Sleep before
he take a Bezoardick, and let him
wake moderately. And the Pati-
ent should not take his Bed,
till they are come out six days.

The *Belly*, before they are per-
fectly come out, though it be Co-
stive, must not be unseasonably
loosened, concerning which see *Lan-
gius dissertat. de Morbil. §. 99.
et Sequ.*

All *Passions* of the Mind must
be avoided, especially Fear, by which
I have known several fall into this
Disease: So Care and Sorrow must
be avoided. I think Joy is the
best: For a quiet Mind in this Di-
sease as well as in the Plague, is the
best preservative.

§. 13. Pharmaceutick Cure.

NOW we shall, as formerly
we have done, give you the
Pharmaceutick Cure according to
the Mind of the Galenists. And
they begin with bleeding, before
the fourth day, or the Small Pox
break out; especially if upon the
coming of them out, there be a
violent Fever, Restlessness, and Dif-
ficulty of Breathing, If the U-
rine be thick and red. They re-
peat it in elder Children, especially
if the Fever be high or any other
Symptom. The *Paris* Physicians

forbear not young Children at the Breast. Some, instead of bleeding advise Cupping for Timorous People. Before the Small Pox come out, if there be a Cacochymy, the Ancients advise Purging: But if they be coming, or already come out, they suspect it. Therefore they give only gentle things, such as Rhubarb, Cassia, Manna, Tamarinds, Syrup of Roses solutive, &c. After bleeding, and other Evacuations, they say, the coming out of the Small Pox must be promoted; to which end they advise not only Specifick Medicines, which drive the Humors to the Skin, but Diaphoreticks also and Alexipharmacks; especially if the Small Pox be Epidemical, and they commend the common and well known Remedy of *Rhases*, *Avicenna*, and the whole Family of the *Arabians*.

Take of fat Figs seven Ounces, Lentils husked two Drachms, Lacea two Drachms and a half, Gum tragacanth, Fenil-seed each two Drachms. Boyl them in a Pint and a half of Spring-water, till a third part remain. Give a little with ones drink.

Or they Prescribe the following Julep.

Take of Root of *Scorzonera*, Sorrel each one Ounce, Harts-horn half an Ounce, leaves of Scabious, *Scordium*, *St. John's Wort*, each one handful, fat Figs six, Gum-Lacca three Drachms, Seed of Turnep, *Carduus Benedictus* each two Drachms, Lentils excorticated half an Ounce. Gum-tragacanth a Drachm and

an half. Boyl them to a pint and an half. To three Ounces of the Colature add an Ounce of Syrup of Limon. Give it twice or thrice a Day.

If the Malignity be such that they think we should use Alexipharmacks. For which they commend *Confectio acintha*, Bezoar-stone, Pearl, Harts-horn, Oyl of Sassafras, and other things; not that they omit Corroborators, both internal and External through the whole course of the disease, for the special cure of the epidemic, see *Riverius de Variis Morbillis*.

§. 14.

Paracelsus and Helmont pour to cure this Disease their *Arcana*. For Helmont counts the principal Indication to be the appeasing of the Disease, which he procures by his purgative *Arcana*. Amongst which *Mercurius Diaphoreticus* is the meanest, with which he says how he has cured a Fever after giving.

§. 15.

Willius, as the common Name of the Disease has been, so he accommodates several Intentions to each of them. Therefore for the first four days, before the Small Pox come out, and the Blood begins to be Ferment, he either vomits or purges; yet he advises gentle purgatives, lest the Fermentation be made too high. If there be a *thorax* he allows of bleeding. Secondly, when the Small

he advises a gentle Sweat, the Blood may gently ferment. And to defend the Throat, he recommends a Decoction of Figs, and Flowers and Harts-horn or Posset-Drink; and he moderate Cordials several in a day. But he says, all strong things should then be avoided. Then he advises the Omission of bleeding and purging. To defend the Throat he advises to stay quilted with Saffron, and dipt in Woman's Milk, and he uses Gargarisms with water. He orders the Throat to be defended with Rose-water, Woman's Milk, Saffron and other things applied by way of Cata-

When the disease is in the Decoction, and the Small Pox begin to turn to a Scab, he says, the fever is usually over; yet he advises a spare Diet kept, and to abstain from Flesh. And when the patient is able to walk, he gives a purge three or four times, to carry off the Filth, left in the Bowels. Afterwards he allows a spare Diet.

§. 16.

This is for Prevention, when the Small Pox are Epidemick, and in one House are taken up, and there are others who have not had them. In such a case he would have Children that are well, to be carried into such as are infected, into a Chamber Air, in which there is the Small Pox. But if the Small Pox be kindly, he is against the use of Air. And so for Prevention, he thinks, That diligent and grateful Purges should be

given, according to the diversity of the Humors.

But as soon as the Head-ach, with the rest of the Symptoms of the Small Pox at that time, appears, he says, we must take care, if Blood abound, to bleed a Vein, and take a convenient quantity of Blood away. And then within an hour or two after bleeding he would have the peccant Humor carried off that way it inclines; when there is loathing, by Vomit; when there is a desire to go to Stool, and a disturbance in the Belly, by Stool; and when there is a Sweating, he would have the peccant Matter carried off by Sudorificks; and above all others he commends Antimonials, because they cleanse the Blood; and he advises the Repetition of the same several days, especially when there is no Fever, and the Small Pox are come out, and the Symptoms are almost abated: then he says, That *Antimonium Diaphoreticum*, and *Bezoarticum Minerale*, are noble Medicines; next to which are divers sealed Earths, Bole-Armenick, *Terra Lemnia*, Bezoar-stone, Unicorn of all sorts, Ivory, Harts-horn, and especially gentle volatil Salts.

As for Externals, he commends all such as temper heat, when the Small Pox tend to Suppuration. Among which he commends Mutton-broth, Hogs-grease, Pork and Bacon, with which he would have the Small Pox anoynted all over; And if an Apostem any where be feared, he ties to *Balsamus antisepticus*, *succinatus*, or Balsam of Juniper.

When the Eye-lids are hurt, or the *Tunica Cornea* fretted, he commends Woman's Milk, with Saffron

from and Rose-water. But before this Epitheme he prefers the juice of Chervil, with a little Rose and Fenil-water applied with a Linen Cloth doubled to the Eyes. In other diseases of the Eyes and a *Panits* he says sharp things are good in a Cataplasim.

If the Small Pox cause an Inflammation in the Ears, he highly extols Spirit of Wine and *Sal Ammoniack*, poured into the Crum of White-bread, while it is hot, and applied hot: also a Decoction of Wormwood, lesser Centaury, Southernwood, and any other Aromatick Plant, put into the Ear hot; he commends likewise any Balsam of Sulphur, if a few drops be put into the Ear with a Feather.

In Shortness of Breath and a Cough he magnifies Antimonial Medicines, especially Diaphoreticks, and gentle volatil Salts.

§. 17.

HA V I N G given you a taste of these things, now we will proceed to our own Method of Cure. As for prevention, first of all, Air and Contagion must be avoided, then the Body must be kept free from all Filth. Gentle Purges may be given to carry off the vicious Acid. The noble *Digby* accounts it an Universal Preservative, if when a Child is born, the Blood that is in the Navil-string, when cut, be washed off with Wine; but I have tried it hitherto to no purpose.

I have found gentle Acids, and Absorbents, especially with Myrrh in them, very effectual in preserving several Bodies.

As to the Cure it self, these things following must be observed. One

Cure must be insisted on in distinct, another in the flux of the Small Pox; because in these the as well as other Symptoms commends the Patients for fever after the Pustules are come out, but in the distinct the Symptoms are not so violent. Since there are three notable times of this disease, the Beginning, to wit, the first, the time of Eruption and Suppuration of the Pustules; and the time from the state of the disease till the Small Pox dry away and fall off, three curative Intentions also must be accommodated to every one of these. That all therefore may proceed aright, Diet, as we said before, must be observed through the whole course of the disease, observing things peculiarly. But about things it is necessary, that the Patient avoid over-heating himself in Bed, as that famous Practitioner Dr. Sydenham testifies, who says That more dye of keeping the Patient hot than too cold. For as Food soon ripe is good for nothing, so no good comes of keeping the Patient hot. It must ever therefore be our care, that an even Temperature of Ebullition be maintained in the Blood; and we should have chiefly for the first six days, especially if the Patient be in the latter end of his Age, or have exalted Blood with high drinking, that it be Spring or Summer. The Patient must not be kept hot with Cloths, nor with a Stove; he must forbear hot Cordials oftentimes, the longer Nature is in endeavouring Separation, that the Effervescence do not cease, the surer the Separation

here we forbid Purges, Vomits, and Bleeding. These Evacuations the Effect is not only too much by means whereof in the Parts to be purged should have been separated; every thing is carried off, should have supplied the begun. Neither is it our here, to expose the Patient to the Cold: However the proper degree of heat to their expulsion, must be. But if upon bleeding un- ly, or taking of Cold, the strike in, then I think we gentle Cordials; yet we care, that we exceed the use of them. There- fore, all hot things should for the first days; since People in the Small Pox. For this reason beginning we forbid our Patient open Air, Wine and Flesh; then drink we allow them medicated. For their Diet, as we said before, of and Barly-grewel, Apples, by the last of which I Country Peoples Chil- dren, when all other things omitted. Truly it is the way for the first six days their Expellers and Sudori- and to give gentle Acids, Tincture of Columbine, of Flowers, and juice of. The famous *Waldsmidi-* how to make an excel- lent against the Small Pox, he has hitherto used with success; so that not one, who took it in time, dyed of the Pox. And he adds nothing but that he recommends

gentle Bezoardicks with Myrrh in a small dose to some on the seventh, eighth and ninth day. I have seen so many effects of this Spirit, that I dare boldly say, no one for the future could dye of the Small Pox, if so be he used but this Medicine, and avoided the heat of the Bed for the first days. Certain it is, that several have dyed of too hot a Regiment: for we have observed that Pissing of Blood, purple Spots, Phrensy, Apoplexy and Death it self have risen from the unseasonable use of Cordials. The Blood takes time for separation; and if we hasten it, it will prove Abortive. Therefore at first all Precipitants must be avoided, till upon the Ebullition being finished, Separation be made in the Blood.

On the fifth day you may confine your Patient to his Bed, and give him some gentle Cordial: For instance;

Take of *Diafscordium* one Drachm,
Water of *Scorzonera* one Ounce
and an half, *Cordialis Herc Sax.*
frig. half an Ounce, *Syrupus*
Acetositatis Citri two Drachms.
Mix them for one Dose. Or,
Take of water of *Carduus Bene-*
dictus, *Scordium* each one
Ounce and an half, liquid *Lau-*
dazum fifteen Grains. Mix and
give it.

Or give the following Expulsive
Water.

Take of Root of *Contrayerva*,
Scorzonera, Fenil each half an
Ounce, leaves of Scabious, *Scor-*
dium, Flowers of Pansy's, Co-
lumbine, Marigold, Bugloss, Vi-
H h h 4 olets

plets each half an handful, shavings of Harts-horn six Drachms, Gum-lacca two Drachms, Seeds of Columbine half an Ounce. Infuse and destil them, with Decoction of Lentils what is sufficient. Make an Expulsive Water, of which take two or three Spoonfuls once in six Hours.

Or,

Take of *Extractum Theriacale* Ten Traints, *Terra Sigillata*, Irish Slate each one Scruple. Mix them. Make a powder. Divide it into two equal parts. Give it in Cordial Water.

Or,

Take of Seed of Columbine, Turnep, *Carduus Benedictus* each two Drachms, with Water of Fumitory and *Scorzonera*. Make an Emulsion.

You may give to the Poor half a Drachm of Columbine Seed, or according to *Ettmuller's* mind this following.

Take of *Antimonium Diaphoreticum* or *Mercur. vitæ parat.* one Scruple, Myrrh five Grains, Castor two Grains. Mix them. Make a Powder, and divide it into two equal parts.

But because these Powders are bitter, and are loathsome to young Children, we cheat them with the following drops; and the success is as good; Essence of Myrrh or Castor Alkalifate. Or before the Extraction, it is well imbibed with Oyl of Tartar *per deliquium*. We may mix *Elixir proprietatis sine acido* with watry Vehicles, and so give it with Success. For we commend Myrrh as a Medicine confir-

med by many Experiments in Small Pox and Measles; and may call Essence of Myrrh *Terra Salutis*. So likewise we commend Essence of Castor, as Simple, as Compound of *Cassia* and *Assa Fœtida*, with tart Spirit of Wine, as a preferend and curative Medicine. An infusion of Horse-dung is admirably good in ones ordinary drink. *Ettmuller* prefers the use of *Stagnum* dung in the Small Pox and Measles. Authors commend the *Sapetra* of *Maltba* for their artick virtue above oriental Amber it self. We prefer Irish before it, wherewith we have more good, than with oriental Amber. The Dose is from half a Spoonle to a Drachm. So *Saccharum Magisterium Saturni* given inwardly, do in this case wonderfully qualify the Acid of the Malignant Blood and *Lympha*. For their use is excellent in all internal Inflammations. Here also *Diaphoreticum Regulinum* will do good. *Antimonium Diaphoreticum* with Harts-horn in Emulsions, and a little Myrrh, will be an excellent Expeller.

And when the Pustules come out, it ought diligently to be considered, whether the Small Pox be Distinct or Confluent; where one may easily know by the greatness of the Pustules, their Paucity, slow Eruption, and want of violent Symptoms: for such are the distinct kind. In this case when they are come out, Care may be given, and a little hot Diet may be allowed, Panado may be proper. The Confluent are dangerous; and here the Physician has an opportunity to show his Skill.

the Art of Physick can
We know indeed, that the
Pox are reckoned among
that Women cure; but
many do they kill, especial-
ly such as have the Confluent?
a doleful thing in this Age
wherein Women prescribe
Physicians, and they recommend
late, or *Diascordium*, or
which if a Physician will
know of, then they rail at and
him. Since therefore after
each day by the Suppuration
many *Buboes* a new Fever,
not a continual one, is raised,
often kills the Patient on the
four or thirteenth day, gentle
must again be given frequent-
ly the seventh, eighth and ninth
gentle Bezoardicks with
may be given. Therefore
of the Pustules being
and promoted, and the
of the Body abating, we
endeavour a third thing, that
of them may be fi-
which we may easily ob-
often giving of Antimoni-
Medicines, adding
Myrrh. Here is a re-

In the Malignant Small Pox
and Measles, if there be Signs of
Convulsions, Epilepsies, Phrensy,
&c. if there be want of Sleep,
grievous Pain, &c. then it will be
advisable to give a Bezoardick pow-
der made of Diaphoretick Anti-
mony, *Terra Sigillata*, Harts-
horn prepared without Fire, *Con-
trayerva* Root; Bezoar-stone may
be joyned with Cinnabar of An-
timony, adding a few Grains of
Magisterium Anodynum.

We hasten to another design,
namely, to take care of the Sym-
ptoms that happen at the time of
the disease. Among these Vomiting
has the first place, and is the Pro-
logue of the Tragedy, which I
think we should not stop in the Be-
ginning, unless it be very trouble-
some, and then it may be stopt
with Alexipharmacks and Aroma-
ticks, but especially by the Out-
ward Application of our Balsa-
mick Cataplasim of Chocolate, Oyl
of Nutmeg, Balsam of Cinnamon,
and Spanish Wine; or of Treacle
mixt with *Pulvis Pannonicus ru-
ber* and Nutmeg, and applied. So
also dry Bags made of divers Aro-
matics will be proper.

Then there is another Enemy,
namely Spitting, which always
accompanies this disease. There-
fore we must greatly endeavour,
that the said Salivation may con-
tinue in its Vigor, and not stop
before its time, which nevertheless
may be stopt, on the thirteenth or
fourteenth day, with Opiates, or
other Paregoricks may be given
once or oftener: For instance;

Take of Flowers of Panies, Cow-
slip each three Drachms, liquid
Laudanum Ten Grains, or
more

Pustules
diligently
ner the S
fluent; w
by the g
their Pa
d want o
r such an
In this
out, Cor
little ho
Panado
nent are
Physicia
ow his S

Crabs-eyes one Scruple,
Terra Sigillata half a Scruple,
six Grains. Mix and
Hereby the work of
uration and Maturation is
noted; also Marine Medi-
Coral, Mother of Pearl
Crabs-eyes do the same
to which notwithstanding
we must always joyn Myrrh;
we shall promote Suppura-
that the Small Pox shall fall
without pitting.

more if there be occasion, which and other things may constantly be given in the Evening.

But before the thirteenth day Salivation must rather be promoted than stopt. And for this purpose it will be proper to give the Patient his Belly full of Small Beer to drink.

There uses to be also a swelling of the Face, which may be cured by the same Medicines; but these and other things may with more Benefit be given to Old People than to Children.

In the Confluent a Looseness troubles Children most, as Salivation does grown Persons, for Nature contrives to evacuate the Morbifick Matter by this way or that. In the Confluent one must not stop the Looseness too soon, as is usually done in the Distinct Small Pox.

In a Phrensy, which happens in the Distinct kind, Dr. Sydenham admits of Blood-letting, especially where the Face does not swell, and Pustules appear in great plenty. So he thinks likewise they should be taken up from their Beds, and exposed to the open Air: for so he has seen several cured of their Phrensy.

But if in the Confluent Small Pox the Spittle be so baked and viscid with the preceeding heat, that the Patient is well nigh choaked, as is usual on the eleventh day, a Gargarism may be used, which must be diligently syringed into the Throat: For instance;

Take of Water of black Cherries, Primrose, *Aqua Expulsiva* each three Ounces, *Oxyfaccharum* or

Oxymel of Squills one Ounce. Mix them. Or, Take of Barley Water six Ounces, Honey of Roses one Ounce. Mix them.

So Bags are applied to the Crown of the Head, made of *Amygdal. Olibanum*, Seed of *Nigella*, Flowers of Roses, be-sprinkled with Oil of Amber; or a hanging Cataplasma made of leaven and Amber must be applied.

When Choaking is feared, *Sydenham* is for giving a Vomitive one Ounce and an half of *Elixir* Wine.

But if a grievous Acrimony or an excessive Ebullition of Blood cause Epileptick Fits about the turning of them out, *Spiritus cervi succinatus*, and volatile Oil of Man's Skull will be good for Children; but *Cinnabar* of Mercury will be proper for Old People, and *Specificum Cephalicum D. Michaelis*, built upon *Basis*, is good. Also this Cataplasma or Lick Powder of *Ludovicus* will be proper;

Take of *Pulvis Bezoardicus* one Drachm, white Amber half a Drachm, Native *Cinnabar* one Scruple, *Laudanum Opiatum* three Grains. Mix them.

This following also deserves recommendation.

Take of native *Cinnabar*, of Man's Skull, Elks hoof each half a Drachm, *Bezoardicum* prepared Emerald each half a Scruple, Saffron half a Scruple, Amber-Gryse two Grains.

Make a powder.
there be Pissing of Blood,
it proceeds from the Kidneys
affected, it is cured with E-
of the four Great Seeds,
Trochiscs of *Alkekengi* and
which must never be used
Beginning, but in the Declen-

Come, which depends upon
struction of the Cortical part
Brain, when that Viscid Mat-
which causes Salivation, is Coa-
in the Brain, may be cured
obstruents, and here all Ce-
and Martial Aperients and
gentle Volatils will be proper.
removing the Purple Spots,
temperation of the blood by
said remedies will be pro-

Suppression of Urine, which
seizes young and brisk
from a Confusion and
Morder of Spirits, that serve
cretion, through the Blood
humors being disturbed with
heat, Dr. Sydenham found
better than to take the Pa-
out of his Bed. Here it will be
hold Water in ones Mouth:
gentle Dieteticks be omit-
as Tincture of *Alkekengi*
with Spirit of Salt, sweet Spi-
Nitre, *Tinctura Mæbii* ape-
mixt with Spirit of Amber;
Spirit of Nitre, mixt with
of Sal Ammoniack and im-
with Oyl of Parsly and
rings.

Patient complain of a Pain
Heart and Restlessnes, by rea-
taking cold, and if the Pu-
fall or if there be a Looseness
then the abovesaid Cor-
tions made of *Diascordium*,
liquidum, and destilled
Waters will be proper.

When the Patient is upon reco-
very, and the Pustules are falling,
when he has tasted Flesh again for
a few days, that is, about the one
and twentieth, Dr. Sydenham advi-
ses bleeding in the Arm, if the di-
sease be violent; but if the Pustules
be few, he rather omits it, and in-
stead thereof gives a Purge:

Swelling of the Feet and Legs is
helped by Emollient and Discutient
Herbs; as leaves of Mallow, Mullein,
Bay, Flowers of Elder, Melilot,
Chamomil boyled in Milk.

In the coming out of the Small
Pox special care must be taken of
the Palat & Lungs, which because of
the abundance of Blood that passes
thither, & of their Membranaceous
Substance, are the most obnoxious
to this danger. For in them either
an Exulceration is apt to follow, or
the Motion is hindred, which is at-
tended with Choaking.

If therefore the Pustules be alrea-
dy come out, and fallen off, and
the Urine have lost its redness, we
must abstain from Diaphoreticks,
and have respect to the Depuration
and Purification of the Blood, for
which end things that we have often
mentioned will be proper. But if
there be signs of the Lungs being
touched, and if the purulent Matter
sink to the botom, besides an ex-
act Diet, divers Antiphthical Me-
dicines must be made use of. We
have used the following destilled
Water with Success; in which we
also gave a few drops of *Balsamus
Sulphuris anisatus*.

Take of leaves of Betony, noble
Liver-wort, Wall rue, Sanicle,
leaves of Scabious, red Poppy,
Daify, St. John's-Wort, Colum-
bine each one handful, Roots of
Colts-

Colts-foot, Fenil, *Scorzonera*, each one Ounce. Infuse them in water of Scabious, red Poppy, Burnet, Brooklime each one pound, Goats-milk two pounds. Add the Liver and Lungs of a Calf. Infuse them twelve hours, and then distil them according to Art.

Here also pectoral sulphurated, & myrrhated Aperients are proper.

Moreover, if from difficulty of Breathing and other Signs there be any suspicion, that the inner Parts are affected, we must beside the foresaid things help them with Traumaticks of *Terra Sigillata*, Diaphoretick Antimony, and Crabs-eyes. So likewise it happens, that in the State, Patients, either through the violence of the disease, or excessive Sweating, suffer a great decay of strength, in which case Corroboraters will be proper, and Tincture of Coral made with Spirit of a Stags Heart, and other gentle Cordials.

As for defending the Parts, the Eyes and Throat deserve consideration especially, lest they should be hurt with the Small Pox: for from the one Blindness may be feared, from the other Strangling. Many things are commended by Practitioners for defending the Eyes. This following is usual.

Take of Water of Roses, Plantain, Night-shade each one Ounce, Saffron one Scruple, Mucilage of Quince and Sumach-seed half an Ounce. Mix them, and anoint the Eyes therewith.

Rock Crystal also applied to the Ball of the Eye, is good against the Small Pox. Women's Milk, Goat's

Milk and Cream are good in Case. So in the Inflammation of Eyes *Saccharum Saturni*, Water of Blew-bottle, &c. is good.

Oyl of white Lilies, sweetmonds, and a little Oyl of Citron good to preserve the Nose; or Vinegar impregnated with Camphore may be given to smell to.

When the Hearing is hurt, Infusion of *Carduus Benedictus*, Stor, &c. is good.

Divers things are commended for preserving the Neck and Throat, such as Gargles, Mucilage of Seed of Quinces, Line, Fennel, Greek, juice of Crey-fish, a Decoction of *Balaustia*, *Rob diamoroni*, and *Diamoron*. If a dry Cough afflict a Man, give him Symplics of Scabious, Liquorice, and Juniper. You may also give him in his ordinary drink some Horse-dung, which by reason of its nitrous Salt is a useful Medicine. Or Sheep or Goat-dung may be given. This following is good for Burning and Sore Throat.

Take of a Decoction of Columbine in Wine and Water six Ounces, *Diamoron* one Ounce and half. Mix and give it.

When the Small Pox or Measles strike in with great Anxiety; beside the said Cordials, I highly commend Saline volatils taken inwardly. Above all I use to make choice of the Essence of Myrrh, made with the volatile Spirit of Sal Ammoniac, which seldom failed me, or *Essence of Myrrh*, the *essence of Myrrh*, which I have found excellent in striking in of an Itch, in the face, or undue-procedure of the Milk, and *Lochia*. In this case Blister

especially if a Suffocation be feared, they may be used to the Wrists and Feet, Camphorated Treacle. In the gentle Coolers and Externals must be given inwardly.

For general Preservation Medicines Myrrh are good, *Elixir Myrris*, *Tinctura salutis*, *Elixir Myrris*, &c.

For drying up of the Small Pox Internals, Externals also are good, such as *Pulvis Specificus*

Mysichti, *Unguentum camphoratum de lithargyro*, or *Cosmeticum Clavii*.

For taking away Redness and Spots.

Take of Water of Frogs-spawn, Solomon's Seal, white Lilies, Bean-flowers each one Ounce, *Fecula ari* one Drachm, Camphore half a Drachm, *Cosmeticum Clavii* one Scruple. Mix them, and use it.

CHAP.

C H A P. VII.

Of Intermittent Fevers or Agues, and in particular a Quotidian.

§. I.

WE have done with Malignant Fevers; now we will proceed to Intermittents. For Fevers are distinguished into Remittent and Intermittent. It is called a Remittent, when the Fever abates: and Intermittent, when it goes quite off, and at length comes again, and in every Fit of an Intermittent coldness preceeds, wherein it is distinguished from Continual ones. For that is an Intermitting Fever, or an Ague, as was said, which, as to its Fits, does not only remit, but intermit a while; so that all the time of the Intermission the Patient is wholly free from any Fever.

The chief differences of Agues are, 1. On account of Time; one is Quotidian, which we now treat of; another Tertian; another Quartan, which must be understood Inclusively not Exclusively. There are also Quintans and Sextans; and not long since I met with a Painter at the Court of *Hesse-Cassel*, who had an Octan. 2. On account of its disposition; one is called benign, another Malign. 3. On

account of the Humors; one is led Legitimate, another Spurious. 4. On account of Complication some are called Simple, others Compound. The Simple are, when but one Ague holds a Man; Compound, if two or more joyne combined among themselves, invade a Man the same day.

This therefore may be the Definition of a Quotidian Ague, namely, That it is a *Preternatural fervescence of the whole Mass of Blood every day afflicting a Man at the same Hour, with heat, cold, and thirst, arising from febrile Ferment, that is foreign and disturbs the mixture of Blood.*

I said *at the same Hour*, because several Physicians distinguish Quotidian from a double Tertian, which tho it return every day yet it seldom returns either at the same time, or in the same manner; but we allow not of this distinction. And a Quotidian, in respect of the manner of its Generation may be called Primary or Secondary. That is Primary, which comes without a previous Tertian, or other disease: And that Secondary, which follows a Tertian, or

One is Legitimate, produced by a febrile Matter of the same Nature; another is bred of a Matter of a different kind and temper; and this is more frequent than the

Part affected, or the Subject.

THE Ancients held the Heart to be the principal Seat of all Fevers, and indeed of all heat; and the Mass of Blood, or rather the Body to be the less principal; but in what part this Febrile Matter is bred, and how it is communicated to the Mass of Blood, the Heart, has hitherto puzzled ingenious Men. Some Ancients hold, That the Putrefies in the Mesaraick, but the Circulation of the Blood, convinces this Opinion to be false. Others blame the Putrefaction of the Bile in the Liver, which is doubtful; because Bile never corrupts; besides, no formal Reason of this consists not in Putrefaction, but in the manner of Fermentation, as *Fernelius*, who is very busy in the explication of Fevers, has refuted all other Opinions, and has set the proper Seat of all Fevers to be in the first part of the *Præcordia*, Stomach, or Hollow of the Liver, *Pancreas*, Cawl, and Mesentery. And so *Helmont* makes the Seat of Fevers to be in the first part of the *Pylorus*, along with the *Stomachum*, and manifold Vessels, the Guts and Veins of the Mesentery, to the Spleen and Liver. But these things are too

general, & the particular place is not designed: Therefore the excellent *de le Boë Sylvius* propounds another, and a newer Opinion about the Seat of Agues, well worth the consideration. He makes the *Pancreas* alone to be the Seat of all Agues, because of the Obstruction of the one or the other of its lateral Ducts; and he gives considerable Arguments for it, and proves, That the Fountain of Agues, and their mad Symptoms, cannot be better solved, than by the *Pancreas* alone. Now, tho I do not deny, that the *Pancreas* is the Seat of several Diseases; yet I have hitherto, and might very well question, whether it be the Place, Fountain and Seat of Agues, since it is from experience evident, That from all Parts, even the most remote from the Heart, something may, at some certain time, be communicated to the Blood, which is able to disturb its mixture, and produce an Ague. For I have seen a Tertian Ague caused by an Ulcer and *Fistula* in the Foot; while the *Fistula* ran there was no Ague, but as soon as it was healed up, an Ague came. Wherefore I am perswaded, that a Febrile Matter may lye in any solid part, and may at certain times be communicated to the Mass of Blood; which, as I said, upon an Ulcer tending to Suppuration, from an Obstruction in any part, may produce an Ague, inasmuch namely, as by such an Inflamed or Ulcerous part, some share of the Inflamed or Ulcerous Matter is communicated to the Blood, which passes to and again through all parts, and by disturbing its mixture, causes an Effervescence, which we call a Fever.

And

And we do not deny, but the cause of Agues may lye in the Vessels of the *Pancreas*, Stomach, Mesentery, and other remote Parts; also in the very Humors, Chyle, *Lympha*, &c, yet I reckon, that generally there is an Obstruction of one or more Vessels in the Stomach, and of the Chyliferous Ducts in a Quotidian Ague. And reason does evince as much: for in this Ague the Stomach is always observed to be weak and to swell. We may make a guess also from the *Fruantia* and *Ladentia*: for it is better cured by Stomachicks, than by any other Medicines; and it comes quickly after Eating.

The manner of an Agues coming, is generally from a particular stoppage of the Lacteal Veins and Chyliferous Duct; then the Matter in the first ways thickning, by means of Natures Propulsion being excited and proceeding to its accustomed work of Nutrition, and poured into the Heart, produces Tumults. Here two things are especially to blame. 1. The Alteration of the Nature and Substance of the Chyle, both of it self, and because of things mixt with it. 2. The Obstruction of the Chyliferous Veins; yet so as not quite to deny a passage. The Chyle therefore offends not so much in its first Qualities, as when it is over thick, clammy, tough, sharp, and acid, and lingers too long on the High-way to the Heart; and when it is communicated to it, and by consequent to the Blood, it Exagitates the Blood so long, till the excrements which it brings with it being attenuated, fly away by insensible Transpiration, and

that which cannot be conveyed is separated by proper ways. This Assertion is evident from the natural State: for after Meat we often in our natural State take with a slight Shivering, and sometimes we grow hot; what must we do, if any thing Preternatural be carried thither? wonder then, the more remote Chyle is from the natural State the shaking and cold Fit be much the fiercer. For Viscid, Continous Meats, Fish, &c. occasion Fevers, Crudities and Obstructions. This is apparent by the effects; for the Sick always complain at the coming of the Fit of Pain and Tusion about their Back bone; because *Pecquet's* Chyliferous Duct runs along it, and Lying and Vomiting show, that the fault is in the first Ways. But Fasting alone often corrects the Excess, and removes the Ague for with such the Chyle is, is the Blood, and with the Blood is, such is a Health.

§. 3.

THIS Ague begins ordinarily with coldness and shivering, which lasts about an hour, sometimes more, sometimes less; it afflicts one every day, and terminates a little; it comes quickly after Eating; when the cold heat follows, differing according to the Constitution of the Patient, sometimes violent and sharp, sometimes moderate and mild, sometimes longer, sometimes shorter, with loss of Appetite, Oppression about the Heart, Pain in the Back and Loins, Thirst, Re-

ent of Sleep, Phrensy, fre-
quently, Gaping and Yawning,
and other Symptoms usual
After it has lasted a
it goes off ordinarily with a
more or less. I found this
fatal in a lying-in-Woman
The Urine is not al-
white and thin, but remarka-
ble with red.

§. 4. Cause.

HAVING touched on these
things, let us pass to the
of a Quotidian Ague. The
affirm, that this A-
of Phlegm putrefying
Ways; and therefore they
all things, which are able
Phlegm in the Body, may
of this Ague, such as a
moist Constitution of the
old Age, Child-hood, con-
summing, a sedentary Life,
or Winter time, all cold
Meats, long Sleep, &c.
make the four Humors
the cause of all Disea-

ciently refuted by others, I do not
hold my self obliged to write *I-
liads* after Homer.

§. 5.

According to Paracelsus, a
Mercury, dissolved with an
impure Salt, is the Cause.

§. 6.

Helmont attributes the whole
business to a corrupt Acidi-
ty, wandering beyond the bounds
of the Stomach, and so irritating
the *Archæus*. He says moreover,
that the Fever is not only an expul-
sive endeavour, but part of the
Archæus disordered through In-
dignation against the present hated
Guest, who, according to him, is
the occasional Cause.

§. 7.

According to *van Lins*, the cause
of this Ague is an acid and
crude effervescent Blood, like
Common Bakers Leven, which is
able in an Hours time to trans-
mute three parts or there about,
of the Nutritious Juice into a cer-
tain effervescible Matter. Thus he
ascribes the Cause to a peculiar Dyf-
crasy of Blood. He says, this
Ague generally follows a Tertian,
and he gives a reason; because,
when the vital Spirit is most of it
flown away by the frequent Defla-
gration of the Blood, and the
Blood is thereby weakned, it does
not so well concoct & mature the
Nutritious Juice, but perverts it al-
most all into a fermentative Mat-
ter. And he says, there is great
affinity between a Tertian and this;

for a Tertian often turns to a Quotidian, and this into a Tertian. He adds, That this Ague, besides some fault in the Blood, has infirmities of the Bowels joyned with it; for the tainted Blood may easily fix its Recrements, which it has insensibly gathered, to the Bowels, while it passes through their windings. Hence in a Quotidian Ague he observed oppression of the Stomach, Tenseness of the *Hypochondria*, obstructions or swellings sometimes of the Liver, sometimes of the Spleen or Mesentery: but then they are not the cause, but only Morbid products.

Here also we may enquire, what, in our Author's opinion, may be the cause of the Intermision, and of Fits at set times in Agues? He says therefore after the first Moment, wherein the Nutritious Juice is not assimilated with the Blood (tho its Particles, mixt with the Blood, are as then circulated with it without any great Tumult or Perturbation; and so on, till the Mass of Blood is filled with them to a Turgescence) then immediately it bubbles up and begins to ferment. He compares it to new Bottled Ale, which if it be so close shut, that nothing can evaporate, at first it is kept in the Bottles, without fermentation or violence; but afterwards the Mass of Liquor grows turgid with the *Effluvia*, that are still kept in, ferments notably, and through the violence of the Fermentation often breaks the Bottles. He says also, that this happens at a set time, and at so many Hours distance, as in an Ague the Liquor rises to an height of Turgescence.

He gives the reasons and causes

of the Intermision, and set times of the Fits. Intermision follows because, according to him, Morbifick Matter is spent in a Fit; and so, till a new one be supplied, an Appyrexia must of necessity follow. And the reason the Fits come at set distance of time, according to him, is, because at set Hours the Nutritious Juice meets with the Blood in the Vessels, which growing to a Plethora and Turgescence, causes a Fit that day, and when that is at the same distance of time, sufficient Matter is gathered for a Fit following. Hence, if a Patient be abstemious, the Intermision will be the longer protracted.

And as for the cold Fit, comes before the hot in Agues, says, it arises, when the Part of the Nutritious Juice ending in a State of Crudity towards the Vessels, and attain it not, but comes to a remarkable Acidity, whereby it prick and vellicate the Nerves of the Parts; and so cause a Seizure cold.

In a Quotidian Ague, according to our Author, the whole supply of Nutritious Juice is perverted into Febrile Matter, by reason, of a great taint in the Blood, in that space of time, wherein concoction ought plenarily to be finished, which is usually in eight and twenty Hours, this Matter passes in Turgescence, and causes a Fit every day. Therefore Patients are very weak after a Quotidian Ague, for in every Fit, as much of the Nutritious Juice as turns to the Cause of the disease, so much the Body loses.

§. 8.

reckons the cause of
to be an Obstruction
in one or more of the la-
teral Ducts, by too
much Phlegm carried thither and
there, which usually hap-
pens when Phlegm is driven with
the Force of the Blood into the Pan-
creatic Circulation, and with the
Pancreatic Juice gets into the
Ducts of the *Pancreas* and its la-
teral Ducts in which either through
Stagnation in the Part it self, or
thickening and coa-
gulation in such a manner, that it
obstructs one or more of the la-
teral Ducts. The *Sylvians* as-
cribe Fits of Agues to the Stag-
nation of the Pancreatic Juice in
one or more of the lateral Ducts
by Obstruction, which en-
deavours to make its way, some-
times later, sometimes earlier,
the obstructing Phlegm,
in its Acrimony, and
it produces a vitious Efflu-
via in the *Intestinum tenue*,
which is renewed every day, espe-
cially the Heart, and causes a
very frequent Pulse. And
I endeavour to prove, that a
Stagnation of the Pancreatic
Juice happens, by several Experi-
ments both in Men and Beasts.
I hold, That the cause of
this Obstruction and Fit is in this
manner following. The Pancrea-
tic Juice by Stagnation is made
thick and so by penetrating the
obstructing Phlegm, it makes its
way through it to the common
Duct, when all the Juice is pou-
red out, that which was formerly
in the forelsaid Phlegm still
remains in the sides of the Ducts,

by degrees closes up, whereupon
the Pancreatic Juice is gathered
again for another Fit, which by con-
tinuance is again made sharp,
pierces the Phlegm again, and
raises a new Fit, and the Fits return
at the same distance of time, as of-
ten as there occurs obstructing
Phlegm of the same Quantity and
Viscosity, with a Pancreatic Juice
of the same Acidity and Acrimony.

And the reason why the Fits
return, sometimes every day, some-
times every third day, and some-
times on the fourth day, they hold
to be, partly the difference of the
Stagnating, Pancreatic Juice, and
partly the difference of the obstru-
cting Phlegm.

The cause of the inequality of
the Fits in Agues, according to
them, is, inasmuch as the obstru-
cting Phlegm is more or less vis-
cid, or all the Pancreatic Juice
more or less sharp, and that
through the different use of the
six Non-natural things. And hence
they give a reason, why Quotidi-
an Agues turn to Tertians,
and Tertians to Quartans, &c.

And they say, the cold Fit in
Agues has its rise from an acid
Pancreatic Juice; and the hot,
chiefly from too hot a Bile. And
the reason, why the Fit of an A-
gue generally begins with cold, and
ends with heat, is; because the
Pancreatic Juice being made o-
ver sharp by tarrying in one or
more of the lateral Ducts, after it
is run into the *Intestinum tenue*,
does there with the Bile produce
such an Effervescence, wherein the
Pancreatic Juice, being predomi-
nant in its Acidity, sends sharp
Vapors every way, which are trou-
blesome with a Sense of cold; these,

when they come to the Gall Bladder, by their Acrimony sollicit it to contract it self; whereupon the Bile, gushing out in a larger quantity than usual into the *Intestinum tenue*, drowns the Pancreatick Juice, and so produces such a vitious Effervescence with it, wherein the Bile bearing Sway, causes heat.

Thus *Sylvius* himself deduces the cause of a Quotidian Ague from the Obstruction of one or more of the Lateral Pancreatick Ducts, which occasions a vitious Effervescence of the Bile and Pancreatick Juice in the *Intestinum duodenum*. And, to descend to particulars, in a Quotidian Ague, according to him, the obstructing Phlegm is less in quantity, and not so glutinous, that is, one that returns once in four and twenty Hours.

§. 9.

O THER Mens Opinions about the Causes of Agues being thus premised, we will now give *Our own*. An Ague therefore, in our Opinion, rises, when there is an obstruction in any part of our Body, so that the *Serum* or any other Humor lies still behind it, which when it ripens, and ferments, distends the adjacent Parts, and so presses upon the Obstruction, that it flies open, and so the Humor, which had so long stagnated, is carried by the Lymphatick Vessels to the Blood, and by disturbing its Mixture, causes a Fever there. This Obstruction is usually in the Chyliferous Ducts, in which the Chyle often stagnates, and by tarrying is made over acid

and viscid. Hence the peccant Matter is not always poured into the Blood; but as in Catarrhs and fluxions a Fluxion is raised, so much Excrement is gathered, that Nature can bear no more. In Agues the Fit returns, when the turgescient Matter sollicitates the Cussion again. In a Quotidian therefore the peccant Matter is in the solid Tubes of the Stomach and there is a viscid Chyle in the Guts, because the Lacteal are obstructed: for there is an oppression of the *Præcoria* in this Ague, which shows, that the Stomach and Guts are overcharged with Phlegm, or that Phlegm is among the Membranes: there may be several causes of this effect.

As to the return of the Fit, it is usually in the Manner following. There are Valves in all Parts of the Body, especially in the Back, because many Nerves are there, and there are more in a Nervous than in a Carnous. Now, when upon any occasional cause, a Humor separated from the Blood is carried to any solid Part, so that it breeds an obstruction in the most Part, it will stick there, for it cannot go further forward because of the Obstruction; backwards it cannot return because of the Valves. This Humor, length, being by Stagnation made sharp, does then begin to ferment, and to take up more room, as one may observe in a batch of unvened Bread) so that at length it breaks Prison, is communicated to the Mass of Blood, raising a like Fermentation there, and causes the Fit of an Ague. The peccant Humor cannot all

but some reliques will remain in the part, and then present-ly another Humor is moved to that part, it begins to ferment with reliques, and then breaking again, it causes a new Fit. Thus, if the Humor be carried to the Blood once or six and twenty Hours, before it is called a Quotidian. These things also may be caused by a vitious Chyle, if too Acid by stagnating, be-cause of the obstruction of the Arterious Vessels, and so com- municated to the Blood, hereupon raised, which ceases so long, till another vitious Chyle is bred. This may mechanically demon- strate the Cause of the Blood's growing so wet Hay, an equal quan- tity thereof being put into several Glasses, allowing the same Circumstances to them all, they begin to grow hot at the self same Hour, concerning which see the ingenious searcher of Nature *Antiquitates princip. Philos. part. 2. c. 1.* For in the very same manner, whenever some Particles, being thin and apt for Motion, meet an obstruction in a Tube, they cause what it will, it cannot otherwise be, but that upon the approach of other Particles, they displace another ethereal Matter, and the Particles must undergo another Change, till they attain Cor- rectness, or rather Maturity, and being fitted for Motion, joyn themselves to the Humors, as they move, and coming to the Heart, they cause a disturbance as well in the Mixture of the Blood.

And seeing some Fewel, swim- ming upon some certain subtil Matter, always remains, if by the Pores, opened to that very end, a new Matter arrive there, by the Agitation of the Particles among themselves, it will be altered again, and will ripen in an equal time, and so cause a new Fit. I hold there- fore, that a Febrile Matter is not bred in the Mass of Blood it self, nor preexists in it, but is commu- nicated from some place else at some certain time, by the Tube of a part, whatever the part is, and produces such an Effervescence, by reason of the inequality of Parti- cles entering the Heart, and pec- cant in Motion and Mixture, la- sting so long, till the salvage Fer- ment is discharged by Sweat, or some other way. And these things must be understood of Agues, which have their rise either from the Air, or Internal Inflammati- ons, or Ulcers, &c. But ordinarily, as we said before, these Agues arise from obstruction of the Chy- liferous Ducts, and Stagnation of the Chyle; the more plentiful therefore, thick and acid this is, the longer the ague Fit will be. The Chyle in a Tertian is too sharp, in a Quartan too acid, and in a Quotidian too viscid; but the Sharpness and Crudity is less. Nor can it be denyed, that Nature her self, when she has gone these rounds several times, does, as it were, accustom her self at the usu- al times to get rid of the Matter, if there be but the least remaining; as they that use themselves to Let Blood, or Cup, if they omit do- ing it, feel Signs of it.

As to the shaking, or cold, which Patients feel in the Beginning of

the Fit, it is produced generally by the disposition of the Humor or Chyle, according as it is more or less sharp, or acid, or viscid, and so comes not manageable to the Blood. For these Particles by sticking to the Membranes and Fibres, and vellicating them with their Acrimony, cause shaking. And because a Man never observed shaking to proceed from any thing but Cold, he thinks that this also proceeds from Cold, which notwithstanding is not always true; because such as lye with them, complain of a troublesome heat and burning in them: It is evident also from this, that always while the cold Fit lasts, they are troubled with extream Thirst, which cannot be in any other coldness. Afterwards they feel heat, that is, when the Humor is much moved, and grown sharp.

But if the peccant Matter, carried to the Blood, can be cut and attenuated, so as that it can fly away by insensible Transpiration, then the Fit is at an end, and the Fever conquered; which Sweats, when they flow abundantly in the declension of the heat, it is a good Sign; for when the Febrile Matter is so cast out, the Blood returns to its sedate Motion, and the whole Animal Oeconomy is perfectly restored.

The excellent *Hoffmannus*, as well as I, holds, That there is something convulsive in the shaking Fit: for the Nervous and Membranaceous Fibres are vellicated.

The Fits sometimes anticipate, sometimes postpone, as well on the score of Nature's being strong or weak, as of the Humor or Chyle.

§. 10. Prognostick.

NOW that we have considered the cause, we will proceed to the Prognostick. The Intermitting Quotidian Ague is not so hazardous, but of long continuance, slow and pertinacious; sometimes it lasts six, seven Weeks or longer, before it goes quite away, I have known one last half a year. It is possible also for it to be mortal, as I observed in a lying-in-Woman at Hanover. It sometimes ends in a Consumption; often in a Dropsy; sometimes in a Coma or Lethargy. There is also a general Prognostick for Agues in 4. Aph. 43. of *Aesculapius*. Fevers, in whatever manner soever they intermit, are of no danger. Nor are Agues dangerous, if so be they are properly treated.

§. 11. Dietetick Care.

THE Diet must be thin and inciding.

The Air must be hot and either by Nature or Art.

The Meat must be easy of digestion, because of the weakness of the Stomach; Spoon-meats, Barley-broths are proper, Birds, and Pullets, roasted rather than boyled.

The Drink must be small, Wine sometimes mixt with Spirituall waters may be allowed, the Food must be loose, and the Passion of the Mind moderate.

§. 12.

THE Dietetick Cure being thus briefly made known, the next thing is the Pharmacutic. And first let us see the indications the Galenists propose themselves in the Cure of Agues. They order first, That Humors be prepared, and the effluvia caused by Phlegm removed, to which end they commend all things, which have an attenuating and an inciding virtue. They enjoin, That in a Quotidian Ague care must be taken of the Stomach, and therefore they require, that the Patient be refreshed with strengthening things, both inwardly and outwardly. They exhort the use of Mint and Wormseed, and other Aromaticks. When the Matter is prepared, they recommend two remedies, whereof he boasts how he has cured many contumacious phlegmatic Agues. One of them is the following Decoction of Chamomil

Flowers of Chamomil three Ounces, Sea Wormwood leaves six Pugils. Boyl them in three Quarts of Water, to the consumption of half. Add to the Colature of white Sugar four Ounces. Let the Patient take five or six Spoonfulls every day in the Morn-

Another is a Decoction of *Chilodactylus* and *Guaiacum*, given for five and six days.

§. 13.

THE Paracelsists & Helmontists will cure all Agues, especially a Quotidian, with their *Arcana*, in four days, without Blood-letting. They allow Wine, and maintain, that they can cure all Fevers with a sweating Medicine, that is, *Mercurius Diaphoreticus*, which incides, attenuates, dissolves, and waists the occasional cause, wherever it is, and this without Sweat.

Their other Medicines are Salts of Cephalicks, Majoran, Rosemary, and other things, which must be Alkalies, and given on a fasting Stomach before the Fit. They undervalue all Galenical Remedies, such as Bleeding, Purg- ing, Blisters, Clysters, &c. as insignificant things. Concerning these things see *Grembs* his *Arbor Ruinosa*.

§. 14.

WILLIS will have a Quotidian Ague cured like a Tertian. Only in a Quotidian more regard must be had to the Stomach, that is, the Humors lodged in the Stomach must be discharged; the Obstruction of the *Viscera* must be opened, the weakness strengthened, and withal, we must do what we can, that the Dyscrasy of the Blood may be corrected, and the Ague Fits stopt. Therefore for robust People, and such as have not lost their strength, he commends Vomits above all things; nor does he exclude repeated Purges, that the daily product of Excrementitious Matter may be carried off. Beside these

things, he highly extols digestive Remedies ; and De-obstruents, which restore the Ferments of the *Viscera* and Blood, and correct their Dyscrasies, must be often given. For which end he praises Salts of Herbs and their Extracts, Mineral acid Spirits, and sometimes Chalybeates. When the Stomach is very moist, he orders the following Mixture to be given.

Take of *Aqua magistralis lumbricorum* two Ounces, *Elixir Proprietatis* six drops. Mix and give it.

And he advises the applying the Fomentation following to the Stomach.

Take of leaves of Sea Wormwood, lesser Centaury, Southernwood each two handfuls, Gentian-root one Ounce. Cut them and boyl them in as much White-wine, as will suffice for a Fomentation.

After this Fomentation, he orders some toasted Bread to be Dipt in the Liquor and applied.

Besides, he will have divers Febrifuge Plasters applied to the Wrists.

§. 15.

Spiritus in the cure of Quotidians has the following intentions. First, That the obstrueting Phlegm, which is more or less glutinous and coagulated, may be incided and dissolved, and if possible, carried off. Secondly, That the Acidity and Acrimony of the Pancreatick Juice may be allayed. Thirdly, That the vitious Effervescence of it and the Bile in the Small Guts may be hindred, and amended.

For inciding the obstrueting Phlegm, he commends Aromatics and all volatil Salts; but so that the whole Body may be at once, either with Motion Bath, or Cloths. He cries the following Mixture, as good Quotidian in Melancholick Phlegmatick People.

Take of Water of Parsly two Ounces, Fenil one Ounce, *Aquariacalis simplex* or *Vitæ tholi* one Ounce and an volatil Salt of Amber one p'le, Syrup of *Carduus dictus* one Ounce Mix and give it.

But in a Bilious Constitution and therefore in a Tertian he commends this as useful.

Take of Water of Fumitory Ounces, Sal Ammoniac or tar vitriolated one Drachm, *timonium Diaphoreticum* one Drachm, Syrup of Fenil one Ounce. Mix and give it.

In Phlegmatick and Bilious constitutions he commends this following

Take of Water of *Carduus dictus*, Cichory each one Ounce and an half, *Aqua theriacalis simplex*, detilled Vinegar, six Drachms, Crabs-eyes powdered half a Drachm, Syrup of the five opening roots one Ounce. Mix, and give it by Spoonfull.

For the redounding Humors which cause obstructions, he advises Vomits. To which end he gives with great success a Vomitive *Sapa* made of Antimony. It holds also, that the Humors should be purged off by Stool.

For correcting the preternatural

and Acrimony, he has with
 success used volatil Salts and
 Catharticks, not neglecting Opi-
 um, excessive Cold, an usual Sym-
 ptom of Agues, he advises to put
 drops of Oyl of Cloves in
 the Antifebrile mixture. For
 the heat, he prescribes di-
 luters and Apozeims; of which
 the first place.

§. 16.

Our Cure also is grounded
 on Indications; which are,
 the Febrile ferment may be
 not only out of the Mass
 but out of its Tubes,
 of the Stomach, toge-
 ther with its morbid product; that
 Acidity, or Acridi-
 ty of the Chyle may be cor-
 rected, and the Obstruction re-
 moved, then the Effervescence of
 the Blood must be stopt, the most
 of the Symptoms obviated, and
 the Blood restored.
 The Febrile ferment in Agues,
 especially in a Quotidian, cannot
 be carried off, than by Vo-
 latil Purges, which if they
 be given before the Fit, and on the
 first day, are excellent Remedies.
 They not only radicate, and the
 ferment is stultified up, we judge, a
 Fit should be forborn, and a
 Purge rather given. For
 the Stomach is mightily weakned
 by Vomits. Vomits, as
 they are good in the Beginning
 of the Consumptive (esp-
 ecially where there is a Nauseousness,
 and Oppression at the heart.
 In Vomits we commend such
 as are made of Antimony: but they
 are given only to strong Peo-

ple, because we must always have
 regard to the Tone of the Stomach. It
 is better therefore at the coming of
 the Fit to give Specificks against an
 Ague, and often to mix Purgatives
 with them; that so the first ways
 may be cleared of the Excrements.
 Then these Agues are easily cured
 by correcting, which is done three
 ways, chiefly by Dilution, Preci-
 pitation and Incision; though the
 first be proper to Sharpness, the
 second to Sourness, and the third
 to Viscidity. The Diluters are a
 Decoction of Barley, Whey of
 Goat's Milk, &c. Precipitants are
 of use in these Agues, but they
 must be fixt and Absorbent, such
 as Crabs-eyes, and Diaphoretick An-
 timony. But upon my own Ex-
 perience, I prefer Irish Slate above
 all others in Agues: for the Febrile
 Effervescence is best stopt by this
 Precipitator alone. And this Me-
 thod will be the safer, when the Fe-
 ver is over, if the precipitated Mat-
 ter be carried off by some proper
 gentle Purge: For it does not much
 disturb the Blood, but reduces it
 to its pristine temper and consis-
 tence. Gentle Catharticks are ei-
 ther infusions of leaves of *Senna*,
Carthamum, and *Agarick*, adding
 always Febrifuge and bitter things.
 Incisers are hot and volatil, such as
Carduus Benedictus, Pepper, Mu-
 stard, Wine, Oyl, Cloves, Cam-
 phore, Treacle, Salts and volatil
 Spirits. For all bitter things are
 proper in this case, because they
 strengthen the Stomach, and drive
 away every Enemy (for I have
 seen this Ague removed only by
 compound Essence of Wormwood)
 whether they be given in form of a
 Decoction, or Physick Wine, or
 Tincture, or *Elixir*, as the lesser
 Centaury,

Centaury, Wormwood, Southernwood, *Carduus Benedictus*, root of Gentian, Elecampane, &c. And medicated Wines may be made of these, adding some Purgatives, especially leaves of *Senna*, which often do the whole business. And so do all Aloeticks, as *Elixir proprietatis volatile absque acido paratum*, *Tinctura salutis*, &c. Clysters also may now and then be given to tender Persons, as there shall be occasion, which are made of lesser Centaury, Wormwood, and other things. And Sudorificks, which are here to be used, ought to consist of Salts and Minerals. An Antifebrile, through the Patient's negligence, not taken before, but in the Fit, sometimes makes the Fit twice as strong, as otherwise it would have been; but then he misses the next Fit, and the reason seems to be, because by this means the Matter of the whole mischief was washt off, and all carried out of its lurking hole into the Blood, which made that Fit so much the more violent. At length in the End, and in the Declension of the Fit, we often use (Nature shewing us the way) to give Sudorificks, that the Febrile Ferment may the more commodiously be expelled by large Sweating, in which case they commend *Bezoarticum Minerale*, all fixt Antimonials, Salt of Sal Ammoniack, Harts-horn, *Scordium*, lesser Centaury, *Carduus Benedictus*, Wormwood, *Mixtura Simplex*, Treacle Water, and several other things. Out of the Class of Precipitants, we refer hither Coral, Pearl, Ivory, Egg-shells, Alum, Vitriol, Nitre, Jesuits powder as a Specifick, root of Tormentil, Yarrow, *Specificum Antifebrile Crol-*

lii, Riverii, Mynsichtii, Kermes Arcanum Duplicatum is excellent good, which is also de-obstruent. For the sake of Juniors take the Receipts.

Take of *Arcanum Duplicatum* one Scruple, prepared Crabs eyes half a Scruple. Mix them. Make a Powder. Or,

Take of Ivory prepared with Fire one Scruple, *Antimonium Diaphoreticum* half a Scruple, Myrrh six Grains. Mix them. Make a Powder. Give it the before the Fit. Or,

Take of true Jesuits Bark half a Drachm, Salt of Tartar half a Scruple. Mix, and give it in Wine, before the Fit.

Radix Cava is also commendable if it be taken, from half a Drachm to a Drachm. *Tachenius* commends Crabs eyes dissolved in spirit of Salt of Tartar, and gives it before the Fit. Or,

Take of *Pulvis Bezoarticus*, half a Drachm, *Antimonium* each two Grains, volatil Salt of Horn, white Amber each one Grain. Mix them. Make a Powder.

And so Liquids are not without their deserts, such as Spirit of Nitre dulcified, Essence of *Carduus Benedictus*, Wormwood, Centaury, &c. which ought to be given two or three hours before the Fit in some proper Vehicle for the whole stress of the sickness lies in the giving, that the Medicine may arrive at the stomach, and Heart, or Tube, at the very Moment, when the febrile

to stir in the Blood, and the Chyle be poured in the Blood. Here are Prescrip-

of Effence of Wormwood, *Febrile Mynsichti* each Drachm. Mix them, and forty drops before the Fit.

of *Aqua Febrifuga*, *W* of *Carduus Benedictus*, one Ounce and an half, of Nitre dulcified, *Lau-* *Opium* one Grain an half, Oyl of Cloves (especially where cold violent) Syrup of Orange six Drachms. Mix, and by Spoonfuls before the

if the Stomach and Belly very much, give the follow-

of extract of Gentian, Birth-
Elecampane, Lignaloës,
Carduus Benedictus, lesser Cen-
each half a Scruple, Salt
Wormwood, Ammoniack
one Scruple, *Crocus Mar-*
operitius half a Drachm,
Oyl of Oranges, Fe-
each three drops. With
Proprietatis make
fifteen or twenty for a Dose.

of the remainder of Spirit of
Ammoniack half a Scruple,
of *Mars* thirteen Grains,
powder one Drachm. Mix
Make a Powder for three
Or,
of Salt of Wormwood,
Centauri, *Carduus Be-*
each one Scruple, Ta-

marisk half a Drachm. Mix them in a Stone Mortar, with as much Spirit of Salt as they will imbibe. I should add of Tartar two Drachms. Give half a Drachm, or two Scruples for a Dose.

They must not be too free in cooling Juleps; for hereby their Stomach and Belly swells. Let them therefore drink small Beer, adding a little Wine, or a few drops of Spirit of Nitre dulcified. Spirit of Tartar, freed from its Water, is able to do wonders in this sort of Agues, and it may be cured with this Spirit alone. Opiates also must not be neglected here, especially *The-riaca Cælestis*. I use to mix Jesuits Powder with Purgatives, or, if there be occasion, with Sudorificks, and give them towards the latter end of the Fit. I know how to make an antifebrile martial Medicine, which will never fail you in any Ague. For in opening the Tubes, and sweetning the acid Matter, martial Medicines do the business. First Salts are best prepared with Vinegar. Oftentimes in this case *Mercurius dulcis*, mixt with other Specifics, is the only relief, camphorated Medicines, and Decoctions of the Woods are highly valued. Diaphoretick Powder made of Antimony will help; in defect whereof *Specificum Stomachicum Poterii* will be proper. When the Head is heavy, and the Stomach loaded with Phlegm, *Saccharum Saturni*, or *Lapis Prunellæ* may be given, which by qualifying the heat create a Stomach. And here our advice is to abstain from Blood-letting, unless there be a great *Plethora*. For the Effence of an Ague consists not in a hot Intemperature, that it should require

require taking away of Blood, because the heat is only an Effect; but the Matter lies in the Tubes and Chyliferous Ducts,

Among Externals we reckon this following Febrifuge Plaster of ours.

Take of *Galbanum*, Sal Gemm, powder of Tormentil, Shining Soot of the Chimney, leaves of Shepherds-Purse each two Drachms, Camphore one Drachm and an half, with a sufficient quantity of Turpentine, *Matthioli* his Oyl of Scorpions, Venice Treacle each one Drachm and an half. Make Plasters for the Wrists.

Febrifugum Strobelbergeri and *Mysichti* will do good.

Styptick and Astringent Herbs may be bruised, and applied with Vinegar to the Pulses; to which Empiricks use to tie Paper or Flax. Camphore also may be hung about the Neck. And divers things may be outwardly applied to a weak and swollen Stomach. The following Bag will be proper;

Take of Barley sprouting handfuls, Chamomil Flowers handful, Seed of Cummin besed one Ounce and an half, Oander two Drachms, common Salt one handful. Mix them make a Bag.

Which may be sprinkled on outside with some distilled Carnative Oyl. Spirit of Wine or sam of *Peru* may be applied to Back-bone, or to the Wrists Temples; so may Silver-weed, webs, &c.

Or divers Carminative Oyls, rituous Waters, of Mint, Tre Camphore, &c. In this case *Willis* his Potion of two Dr of *Aqua magistralis lumborum*, and a few drops of *El Proprietatis* will be proper.

As to the Cure of Symptom Agues, it may be found in the of this Book.

Strength must be recruited convenient Cordials and Reftives, of which I shall treat in ther place.

C H A P. VIII.

Of a Tertian Ague.

§. I.

AMONG Agues a Tertian is the most common, which resembles Continual Fevers, according as it is attended with several sorts of Torments, so it sometimes more, sometimes less. This Ague is called a Tertian because it comes at the end of three days; but includes the Day wherein one comes, and the third after when it comes, that is, once in forty hours. It may be described to be a natural Effervescence of the Mass of Blood, afflicting it every other day with Head-ach, Thirst, Cold, and afterwards, &c. caused by a Ferment, coming from the Gall, especially of the Liver, and Bile, which distill into the mixture of the Blood. This Ague is twofold, Legitimate and Spurious. That is legitimate, which of it self ends at the fifth, or sixth, or at most at the seventh Fit, with some Criticism, but generally by a Resolution of some serous and thin Humor, which they call Biliousness, into the Face, Lips, Legs, Ears, and sometimes the Tongue, Palate, &c. That is called Spu-

rious, which lasts longer before it be quite over. I knew a Woman at Hanover, who had it seven whole Weeks; and it decreases so slowly, that it cannot suddenly be removed.

Upon account of Complication one is called Simple, another Compound. That is Simple in which but one kind of Fit comes; that Compound in which there are several. Sometimes a Tertian is Epidemick, which neither spares Age, Sex, nor Constitution; but takes Cholerick Persons most, as I have often observed. This Ague is frequently joyned with the Scurvy, &c. is therefore called a Scorbutick tertian, which the famous Etmuller observed to come without any hot Fit.

§. 2. *Part affected.*

IT is well known with what fierceness Authors contend about the Subject of a Tertian Ague. Some say the Blood putrefies in the Mesaraick Veins, others accuse Putrefaction of Bile in the Liver, others about the *Præcordia*; some place the Seat of this Ague about the Stomach, several about the Cavity of the Liver, and many will have it about the *Pancreas*. Cawl, and Mesentery. And We hold, That the cause of Agues may reside in any solid Part whatever, even in the Fingers,

Fingers, and so may be communicated at Intervals to the Blood, but especially in the Chyliferous Ducts: And tho I do not deny but a Febrile Ferment may lurk in the Tubes of the *Pancreas*, Mesentery and other Parts; yet generally it comes from the Obstruction of a Tube or two in the Liver, and especially from the Obstruction of the Chyliferous Ducts, as the Ancients hold, and reason evinces. For the Jaundice is apt to come upon a Tertian Ague; and there is often a pain in the right *Hypochondrium*, with a dry Cough. All which things happen upon the obstruction of the Tubes, whereupon the Bile not being separated, is apt to breed the Jaundice; or being carried to the Guts, to produce the Colick, Looseness, and other Ails.

§. 3. *Diagnostick.*

AS to the Diagnostick Signs, this disease is obvious to the Eyes, and needs no curious Search. It begins ordinarily with a coldness and shivering, which last about an Hour, sometimes less, sometimes more; when this is gone, heat follows more or less according to the Constitution of the Body, with Restlessness, Loathing, and Vomiting of bitter stuff, by reason of the ascent of bilious and sharp Humors, which vellicate the Nervous Orifice of the Stomach, a Spasmodick Vellication of the Gall-bladder preceeding: For Patients Vomit up the regurgitating Bile and other ill Juices, with violent straining, and in great quantity. And this vellication proceeds from a disorder of the Animal Spirits, which

being disturbed may easily cause Convulsive Motions.

Bitterness in the Mouth attends this Ague, from bitter Particles conveyed thither out of the Stomach by the Glands, or rising out of the Stomach from Bile, like a Vapor to the Jaws, and then to the Tongue, which bitter Particles do so infect the Meat and Drink, that the gustish Persons, not dreaming of an Humor's being communicated to the Tongue, complain that the Meat is bitter. For the Tongue of a spongy and porous Nature, that it is able to quench Lead, Wax, Pitch and other things on Fire, without any harm. In this Ague you shall always find with a pain in the Head and Lungs. The reason is, because in such heat the Pores of the Arteries are very much dilated, so that the acid, cutting and pungent Humors being squeezed out of them, are lodged sometimes in the Lungs, sometimes in the Head, and produce by their violent Motion a Solution of Continuity, and Pain depending thereon.

A Phrensy is often troubled in this case, which arises, because the Animal Spirits ramble beyond their Bounds, fortuitously, in any way and that, without any determination in the Brain; and by their proper Motion are carried to some of its Pores, in the same manner, as they used to be opened formerly at the presence of objects.

By reason of these disorders of the Spirits, Patients are troubled with continual Watchings. And an unquenchable Thirst, as an ordinary Symptom of this Ague, arises from Saline and bitter

carried to the Jaws.
The Urine is red and turbid, be-
cause of the Salt and Sulphur,
which are separated by the violent
action of the Blood and other Hu-
mors in the Reins, and these being
mixed with some Terrene Particles,
make the Urine very high coloured
about six, seven, or eight Hours
after the Ague, Sweat follows, when the
Ague is over, and the Pores are o-
pened again, so that the sharp and
acrid Humors, not duly, but only
partly mixt with the Blood,
are forced through them,
into the Serum; and if the Chyle
is not reduced, all is at quiet, till
the next Ague appears, and then the
same symptoms return.

§. 4. Cause.

HAVING viewed the Sym-
ptoms, we must proceed to
the Cause. First of all, the
Acute Bilious Humors
are said to be in the Liver; but especi-
ally in the Gall-bladder. There-
fore the Tertian they blame a hot
Temperature, Youth,
a Constitution of Air, Care, Fa-
tigue, a hot Diet, and excessive
Drinking. They say also, that such
Persons have a hot Liver, and who
are fond of Drinking, and a bad Diet have
many Crudities, upon
the Nature of the Crude Humors
which are subject to Tertian

§. 5.

According to Paracelsus the
Cause is a Fetid Sulphur, with
Mercury, and an impure
Humor in the region of the

§. 6.

Helmont attributes Agues to
a corrupt Acidity, wan-
dring beyond the bounds of the
Stomach, which irritates the Ar-
chæus.

§. 7.

According to Willis the Cause
of a Tertian Ague is a cer-
tain Nitro-Sulphureous Matter,
wherewith the Mass of Blood is
sated to a Turgescoency, just as
new Bottled-Ale works. If this
Nitro-Sulphureous Matter, which
has much Acrimony in it, be dif-
fused all over the Body, it velli-
cates the Nervous Parts, and dea-
dens the heat and Vital Spirits,
whereupon Chilness and Shivering,
Vomiting, &c. ensue; then, as the
Vital Spirits and Innate Heat pre-
vail again, this Effervescent Mat-
ter in the Blood is subdued; and
then by means of Respiration a
violent heat is diffused all over the
Body, which must of necessity be
attended with Sweat and other
Symptoms.

§. 8.

Splivius blames the Pancreatick
juice, grown sharp, by the
passages being a while obstructed,
and a vitious Effervescence arising
thence afterwards, because further-
more an Acid, together with a
predominant lixivious Salt, being
carried by the lacteal Veins, and
the thoracick Duct, to the Subclavi-
on Veins, and at length to the Heart,
causes heat and a frequent Pulse,

§. 9. We

§. 9.

W^e are of Opinion, That in a Tertian Ague Ferments may lye any where, which being communicated to the Blood, are apt to ferment; for these Particles stagnating in the Tubes, are insensibly more and more altered, and then, when one of them acts upon another by their mutual Impulse, there must needs be a struggle; which being raised, the Matter is carried into the Mass of Blood; and because these Particles are thin and sulphureous, and therefore more inflammable in a Tertian, the Fits usually come at set times. But oftentimes Bile, which is nothing else, but a sharp and sulphureous Excrement of the Chyle and the Chylifick Parts, grown sharp in a certain degree of Corruption, but caused chiefly by External Errors. If this be not voided, but gather, and stagnate preternaturally, first of all it ferments (that is, acts upon the Chyle) afterwards it is dispatcht into the Lacteal Ducts, then into the Blood, and breeds a Tertian. We find the cause of this Ague therefore in an Obstruction of the Tubes, and do think, that the Particles are more sulphureous and thinner in this, than in other Agues. There may also be a great Cacochymy, yet without any disturbance in the Mixture of the Blood. At the beginning of the Fit the Pulse is rare and slow; because the Chylous Matter, that every four and twenty Hours is brought into the Blood, is unfit for Fermentation; and so the Ferment of the Blood abates, and

cold and shivering usually follow. When the mixture of the Blood is disturbed, no wonder, if Fermentation goes on ill, and Spirits bred in less quantity and thick whereupon at length the Blood grows unfit for Motion: For the weariness always in a manner from dissipation of the Animal Spirits, or from Obstruction of Muscles.

We cannot always rely on Duration of the Fit, as on a Sign of an exquisite or spurious Ague. A Spurious all the Symptoms milder, and sometimes therefore longer continuance than in an exquisite Tertian.

Finally, all things may be a catarrhick Cause, which are augment and bring into action Humors, and therefore disturb the Blood; such as inconvenient, especially a Vernal, turned to the North, which being drawn in inspiration, does not only promote the Ferments lying in the Tubes to Fermentation, but by its acrimony Frigidity hinders free Transpiration. But especially bad Food taken in too great a quantity and disorderly, excessive Watching, unseasonable Exercise of Body or of the sudden Passions of the Mind, Excretions suppressed, Ulcers, Inflammations, may corrupt the Chyle and cause this Ague; according to the diversity of all these causes, especially the disposition of the Blood, more or less vitious, melancholick, or so that this Ague is sometimes legitimate and sometimes spurious, and of either longer or shorter.

10. Prognostick.

Generally there is but little danger in this Ague; yea, the Tertian is reckoned as a Spurious, and so is a Spurious, because by it the Blood is not less than generous, but fermenting sometimes more generous. Therefore all this Ague Sanguinipurging Blood-purger. It may likewise degenerate into other diseases, to wit, a Continual Quartan Ague, especially in the latter end of Autumn, and such diseases. Sometimes in Old Men; yea, several of a mortal Tertian occur. A Jaundice commonly a Tertian, puts an end to this Ague, usually this Ague ceases in ten Fits: If it produces more than ten Fits, it is the more difficult to cure. The sooner Concoction is made, the sooner it is over. A sign in the Urine, as a sign in the Urine, argues the Ague will be at end; but when there is no sign, it is a sign it will be long. The more violent the Ague is, the sooner it is at end, if it intermit perfectly. If the Lips be sore, it may last a long time. If a Tertian continue long, it will bring upon the Palpitation, Dropsey, swelled Spleen,

§. II. Dietetick Cure.

WE now come to consider the Dietetick cure of a Tertian. Therefore let the Air be temperate, serene and pure.

Meat of good Juice and easy Concoction must be moderately taken out of the Fit; but in it must be altogether forborn. Avoid sweet things, but especially over high Seasoned and Smoak-dried Meats, Phlegmatick and watry things taken while the Body is hot. And all manner of Food taken to excess or disorderly, all Meats that are gross and hard of Digestion, must be forborn.

Drink must be rather temperate than hot. Altering Tinctures, Spirit of Nitre dulcified, of Salt, of Mars dulcified; or strengthening Tincture of Cordial Flowers, Roses or Violets, &c. may be dropt into Beer. Wine must either wholly be forborn, or a little may be drunk with Juice of Currans or Raspberries, or with Spaw-waters.

Sleep must be procured by Opium, for a secondary intention, mixt with Antifebriles, or Emulsions of Almonds and Poppies: For Watching is exceeding hurtful.

Rest is better than Motion; for Digestion of the Juices is best performed, while the Body is quiet.

The *Belly* must be kept loose: If it is Costive, it must be kept open with Lenitives, Clysters, or Suppositories.

Let the *Mind* be kept quiet. Anger, Grief, Care, Frights, &c. must wholly be avoided.

§.12. *Pharmaceutick Cure.*

HA VING considered the Dietetick Cure, we hasten to the Legitimate Method of healing, upon which the whole stress of the business lies. First, therefore let us see the Method of the *Calenists*, which consists in removing the cause, which they reckon to be Excrementitious Bile. Hence they commend *Evacuaters*, *Preparatives* and *Alteratives*; and because they believe the source of the Matter is in the *Mesaraick Veins*, therefore they hold, That the vicious Humor should be evacuated, and, if need were, be prepared, before it infect the good Blood. They therefore evacuate the first Ways, either by *Clysters*, or by giving *Lenitives* of Syrup of *Roses Solutive*, *Manna*, *Cassia*, to which they add *Rhubarb*, *Agarick*, or leaves of *Senna*, according to the Nature of the peccant Humor. And if the Patient be troubled with the *Heartburn* and *Nauseousness*, they advise *Vomits*.

As to letting of Blood, though *Bile* in the *Mesaraick Veins* require it not; yet if there be a *Plethora*, they advise bleeding, and not presently at the Beginning, but they open a Vein in the State, and at the time of Intermision.

After these things they give such Medicines as correct the excessive Qualities of the bilious Humor. Such are *Coolers* and *Moistners*, which have a virtue of cleansing the first Ways, and checking of *Putrefaction*; such as in their Opinion, are, *Dandelion*, *Endive*, *Cichory*, *Sorel*, the four greater cold Seeds, *Juice of Citron*, *Raspberry*, &c.

and *Emulsions*, *Syrups* or *Electuaries*, made of them. To *bastard Tertians* they add things that *Phlegm* and *Melancholy*, *Fenil*, *Grass*, *Asparagus*, *Pedy*, *Carduus Benedictus*, *Centaury*, *Spleen-wort*, *wood*. *Riverius* highly commends *Cream of Tartar*. Their *Spice* are, *Dandelion*, *Chamomill*, *Centaury*, *Plantain*, *Demulcent*, &c.

After *Purges* and *Vomits* commend divers *Diureticks*, *Emulsions* of the four cold made with *Barley* or *Straw-water*, or *Decoctions* of *Asparagus*, *Fenil*, *Maiden-hair*, *Vetches*, *Chamomil Flowers*, *wood*, *Whey*, &c. Thus in nature endeavour to expel the by *Sweat*, they say it must be promoted by giving of *Sudorifics* either before or in the end of a *Fit*; and in pure *Tertians*, which in Nature uses to move *Sweat* at the end of a *Fit*, let the Patient drink *Barley-water*, or *water of Carduus Benedictus*, *Sorel*. In *bastard Tertians* they give other things, which taken a few Hours before the *Fit*, often remove it.

If the *Ague* will not yield to these said Remedies, and the Signs that some of the *Vitiated* Liver, or *Spleen* too is affected, then, they say, care must be taken of it; and indeed, because the Liver, according to them, in *bastard Tertians*, is obstructed with *Bile* or gross Humors, which in the Blood, they advise the use of such things as correct *Bile*. In which end they praise *Worms* above all other things, because,

has a Virtue to deterge Bile, carry it off by Stool and Urine; to which in virtue is less necessary; wherefore they magnify the Offices of Wormwood, Gentian, &c. external Topicks they express all things a Plaster made of *Unguentum Populeum*, of Shepherds Purse, Nettles, and other Vesicato-

§. 13.

Paracelsists and Melancholics do here boast of cures; of which we have spoken.

§. 14.

Shows his Intentions of curing this Ague, are following. 1. The Relieving the Blood to its natural state. 2. The prevention of the Flow of the Nutritious Juice. 3. The checking of the Febrile Motion, that a Fit may not return. To the first, he Vomits, and Purges in the Beginning. Vomits do good, as they empty the Stomach, that the Absorption may the better be performed, and especially, as they empty the Gall-bladder by the Bile abundantly out of the *Venas Choledochus*, that it may be more plentifully supplied with the Mass of Blood, so that the Blood may be cleansed from the Excrements of adust Sulphur; but he thinks that such should be omitted in the first Remissions. He says, That it relieves, inasmuch as it

cools and ventilates the Blood, so that it is not so much roasted. Purges do good, as they fetch the Bile out of the Bile-Vessels, and consequently out of the Mass of Blood. Above all things he commends Potions or Infusions of Rhubarb and Senna, by which remedy alone, keeping a low Diet, with outward applications to the Wrists and Breast, I have seen Tertian Agues cured. For reduction of the Blood he commends Digestives, and sower things, inasmuch as they check Fermentation and heat of the Blood. He has seen this Ague cured by change of Air. He says that abstinence and a low Diet has often cured a Tertian.

But if a Tertian Ague have rooted it self through some Error committed either in Diet or Physick, towards the latter end he praises Decoctions made of Herbs and Roots, that are gently Diuretick; as also Electuaries made of Conserves temper'd with Salt Nitre, or the fixt Salt of Herbs, mixt with testaceous Powders and Spirit of Vitriol.

When the *Crafsis* of the Blood is a little amended, so that the Urine is clearer, and not so tinged, with an abatement of Thirst and Heat, then he admits of things to stop the Fit; for which end he gives the Jesuits Powder, or Powder of the Bark of Ash, Tamarisk or Gentian, with Salts mixt with them, in White-wine. Nor does he omit Plasters to the Wrists and the Soles of the Feet. In the end of the Ague, he says, a gentle Purge must be given, and a more plentiful Diet may be allowed.

§. 15.

Since in the cure of Agues has not so much regard to the distance of Fits in Agues, as to the diversity of the concomitant Symptoms, namely of Cold and Heat. In Tertians therefore which happen in the Summer-time in a young and virile Body, he thinks, that the Cure should otherwise be insisted on, than in Tertians, which come in Winter, and afflict Old Men and Children. For in the former sort Bile abounds, and in the latter Phlegm. And according to the presence of this or the other Humor, he says, the cure must be varied. If therefore in a Tertian there be great heat, and the Patient be Squeamish, with a bitterness in his Mouth, he says, it is a Sign, that Bile is turgent in him, and affects a way upwards; for which end, on the intermitting day, or if the Fit come after Dinner, on the day the Fit comes, four or six Hours before it comes, he is for giving a Vomit of Glas of Antimony or *Crocus Metallorum* in a moderate Dose, infused over Night in some convenient Water, suppose Cichory or Fenil, adding a little of some Cholagogue Electuary or Syrup, to the end the Humor that tends most upwards, may be carried off by Vomit, and that which inclines downwards may pass by Stool. Afterwards he inculcates, that we should have good regard to the Humors, and so he questions not, but this Ague may easily be Conquered.

§. 16.

IN this Ague we do our endeavour, that the Ferment, generally lurking first Ways, and already communicated to the Mass of Blood, be washed out and corrected, afterwards the excessive Ferment of the Blood may be that the most urgent Symptom may be obviated, and the strength, and ruined Viscera as far as possible, be restored by a special Method of curing an, and all Agues, proceed ways, and with two Medicines Out of the Fit. 2. Before the Fit. The Febrile Ferment may well be removed out of the Ways by Vomits and Purgatives, which must presently be given at the Beginning of the disease, especially if there be Nauseousness, a Disposition to Vomit. But if there is a great Agitation of the Body, then we think we should rather abstain from them. For if you should give Aloëticks, Cathartics, Antimonials, and strong Medicines, you will be like Fewel to the Fire. There should be content with milder things; to wit, Cassia, Manna, only an infusion of Senna, Rhubarb, and Syrup of Marsh-mallows or thorn: And because these are milder, you will do more good with them than with others, though they which must be given, as at the Beginning of the Fit. In Nice People and Children Purgatives are good in the Beginning of the Fit; and I have experienced this with good success in Practice. For without all

Matter was separated from
 blood, and discharged into the
 which vitious Matter, if it
 charged by Clysters, the next
 abate much of its vio-

Purgatives, here, as we
 the preceeding Chapter, Phy-
 tions and wines are proper
 of Worm-wood, lesser
 Flowers of Cichory,
 Gentian, Plantain, Dande-
 Rhubarb, leaves of Senna,
 Spike, which may be
 in a sufficient quantity of
 wine; for instance;

root of Fenil, Gentian,
 broom, Cichory each
 Drachms, leaves of lesser
 Goose-grass, Wall-rue,
 wood each half an hand-
 bark of Contrayerva one
 leaves of Senna one
 and an half, Rhubarb
 Drachms, Seed of Cara-
 Anise, Fenil each two
 Crude Tartar half an
 quilled Cinnamon two
 Cut them, and put
 in a Bag for a measure of
 Or,

leaves of Cichory, Dande-
 Wormwood each one hand-
 root of Cichory, Gentian,
 Monks Rhubarb each
 Ounce, true choice Rhu-
 half an Ounce, Spike one
 Make an extract with
 of Wine.

Pills, Electuaries, Potions,
 and Apozemes may be
 according to the diversifi-
 or the other peccant Hu-
 But I have no mind here to
 of them all, since

every young Physician may easily
 make them out of the aforesaid.
Elixir febrile Mynsichti, *Elixir*
proprietatis, and all bitter things
 are good. Hence the Dutch use the
 Electuary of *Hiera Picra* much,
 by which alone they cure A-
 gues.

A great Controversy among Pra-
 ctitioners offers it self about letting
 of Blood, whether it be necessary in
 a Tertian Ague? It is answered
 in the Negative, especially since it
 is evident, That thousands have
 been cured without bleeding, and
 much in these Countries; and since
 daily experience shews, That such
 as accustom themselves much to
 letting of Blood, are subject to
 Fevers; and further it shews, That
 Agues are prolonged by it, that it
 neither abates a Tertian nor a Quar-
 tan, but rather encreases them, it
 is our advice to forbear letting of
 Blood. But if strength be good,
 and there be a *Plethora*, some-
 times it may be allowed. But
 what benefit can bleeding bring to
 the first Ways?

And this by the way must be
 observed, that in Tertians it is ever
 better, that the Fit should Post-
 pone than Anticipate: The reason
 is obvious, because when the Fits
 come later, it is a Sign, that either
 the Febrile Ferment is diminished,
 or at least moves more slowly out
 of its *Focus*; both which are good
 signs in diseases, especially in A-
 gues.

Out of the Fit, or on the inter-
 mitting days, Medicines must be
 given, that resist Sharpness and
 Viscidity, and open Obstructions,
 to wit, *Anima Rhubarbari*, Anti-
 monial Medicines, *Clyffus Anti-*
monii,

monii, Whey of Goat's Milk, *Tinctura Martis absynthiaca*, *Arcanum tartari*, *Tinctura Martis arcano tartari parata*, *Elixir vitrioli Mynsichti*, *Mixtura simplex*, *Mixtura aperitiva* or *antiscorbutica*, *Spiritus aperitivus Penoti*.

And the Febrile Effervescence may be checkt with Precipitaters; by which alone, without Purging either upwards or downwards, or Bleeding, we have cured several Agues, and towards the latter end we gave a Purge. Among Precipitants we reckon all Earthy things, such as their *Terra Sigillata*, also Coral, burnt Harts-horn, Chalk, Irish Slate, blew Crabs-eyes taken out of live Crabs, Shells and the *Antifebrilia Sennerti*, *Strobelbergeri*, *Mynsichti*, *Crollii*, Pearl, precious Stones, especially *Lapis Lazuli*, a Drachm of which given with some proper Vehicle is a secret in all Agues. But who can recount all Precipitants? Jesuits-Powder, root of Gentian, Silverweed, Plantain, Bark of *Guajacum*. Here is a Receipt;

Take of the remainder of Spirit of Sal Ammoniack half a Scruple, vitriol of *Mars* thirteen Grains, Jesuits Bark powdered one Drachm, *Specificum Crollii* two Scruples. Mix them. Make a Powder to be divided into two equal parts.

Here also, as in all Agues, Cinnabar of Antimony will be proper, things that Vomit and Purge being premised. For it has a virtue of precipitating febrile Ferments and of restraining the violent Motion the Spirits. It must be mixt with the aforesaid opening Pre-

cipitants, and Opiates; for instance;

Take of Cinnabar of Antimony *Antimonium Diaphoreticum* Crabs-eyes each one Scruple, *Tartarum Vitriolatum* half a Scruple, Powder of Shell half a Scruple, *Theriaca caelestis* half a Scruple. Mix them. Make a Powder, and divide it into two equal parts. Or,

Take of the *Arcanum* of Spirit of Sal Ammonick and Vitriol two Drachms, *Essentia Camphorata* one Drachm, Oyl of Clove, Camphore each one Drachm. Mix them. The Dose from fifteen to twenty drops or more in a proper Vehicle.

It is a good way in Agues to mix opening, Diuretick Salts with Precipitants, and to give two or three Doses, an hour successively one after another, before the Ferments these Salts joyned with Precipitants will carry off what is precipitated the Ferments in the Vessels. *Canum duplicatum* with Cinnabar or *Mercurius duplicatus* is an excellent Medicine for Tertian Agues. If a Man knew how to make a Salt of the Combination of Spirit of Sal Ammoniack and Spirit of Salt, mixt with Cinnabar of Antimony, he has a secret with which he may cure all Agues, especially a Tertian. Antimonial Medicines are all proper in this, and Terrene Powders which contain an occult Salt. Also Alchemical Medicines are good, but they must not be mixt with other Salts, Martial ones especially. For mending the Constitution of the Blood, and the Temperament

in the mean time any
 and digestive Medi-
 good; that is, such things
 any great disturbance in
 and by separating, and
 precipitating its Feculen-
 them towards the Emun-
 To which end, Whey boy-
 a little Cinnamon or Ani-
 the following Antifebrile
 will conduce.

Water of *Carduus Bene-*
 two Ounces, Salt of
 Wormwood one Scruple, *Ar-*
duplicatum five Grains,
 of *Carduus Benedictus*
 Drachms. Mix them. Make

lowe, saline, terrene Pow-
 here proper, that is, of
 Nitre, fixt Salts of Herbs,
 wood, *Carduus Benedictus*,
preparatum, *antimoniati*,
um, the excellent Anti-
Wedelius, which is made
um vitriolatum, *Antimo-*
diaphoreticum, Shells, Mo-
 Pearl, Crabs-eyes, burnt
 lem, Salt of Wormwood,
 Centaury, adding a little O-
 and a drop of Oyl of Cloves,
 or Camphore. I have of-
 given first a Vomit of
 Grains of Emetick Tartar
 of Wormwood, and then
 following Powder, whereby I
 cured several Tertians.

Shells, Irish Slate each one
 ple, Native Cinnabar Ten
pulvis anodinus five
 Mix them. Make a Pow-
 for once taking before the

Gentian root with a little *Nux*
Vomica will be better here than Je-
 suits Powder. *Vitrum Moscovi-*
ticum given three or four times, a
 Drachm at once, is good in all A-
 gues. *Sal Polychrestum* is of excel-
 lent use. It is made of Salt of
 Wormwood, lesser Centaury, Sal
 Ammoniack and Tartar, with a lit-
 tle Vinegar poured upon them.
 Here is a Receipt.

Take of *Antimonium Diaphore-*
ticum one Scruple, *specificum*
febrile Crollii one Scruple,
Arcanum duplicatum twelve
 Grains, *Sal Polychrestum* half a
 Drachm. Mix them. Make a
 Powder. Divide it into three
 equal parts.

Or give this following two hours
 before the Fit;

Take of Harts-horn Philosophically
 calcined one Scruple, Salt of
 Wormwood, *Carduus Benedi-*
ctus, Fumitory, each seven
 Grains. Mix them. Make a Pow-
 der; after it is taken, let the Pa-
 tient compose himself to Sleep.

For such Mediciens expel the
 Seeds of the Ague, and restore the
 natural Ferments of the Bowels,
 which are almost destroyed. Opi-
 ates are of no contemptible use in
 Agues, especially *essentia anodina*
Zwelferi, *theriaca caelestis*, &c.
 which may be joyned with other
 Antifebriles. And so divers Marti-
 al, Saturnine, Aluminous Medicines,
 &c. often conquer this Disease;
 for instance.

Take of crude Alum, Nutmeg each one Drachm, *Olibanum*, Pepper each five Grains, Oyl of Cloves one drop. Mix them. Give one Drachm in Centaury or some such like Water.

If continual Sweating accompany an Ague, this following is good.

Take of Salt of Wormwood, lesser Centaury, *Cardius Benedictus*, Tamarisk, mix them with a little Spirit of Salt, just as much as they will imbibe. Add two Drachms of Cream of Tartar, and mix them. Give one Scruple or half a Drachm Morning and Evening.

Also *Nitrum Saturninum* or *Tinctura Antiphthastica* may be given in this case. Excellent Medicines for Tertians are made of Nitre. This following is commended in the *German Ephemerides Ann.* 2. *Obs.* 196.

Take of Nitre two Ounces, Borax two Scruples, Sal Ammoniack half a Drachm, Flower of Sulphur half a Scruple. When the Nitre is melted in the Crucible, add the rest by degrees; when they are all well joyned, pour the mixture upon a bras Table, or Dish.

In a Tertian, and in all Agues we advise violent Motion before the Fit, either on Horse back, or by playing at the Ball, &c. If an Ague come from Worms, as Authors hold, things good for the Worms must be mixt with Antifebriles. For which end Medicines of Myrrh and

other bitter things, mixt with *curius dulcis*, are good.

By the way observe, an enormous swelling of the Feet, sometimes the Beginning of a Dropsy, attends a ballard Tertian. The reason is, because Patients sometimes drink uncorrected Liquors. In which case Motion and Labour must be ordered, and things must be given to strengthen the Stomach and the Blood; among which things excel, viz. *Nitrum Armoniacum*, and other Nitrous Martial Medicines, *tinctura vis, bezoarticum minerale, nitrum duplicatum*.

Among external applications commend Garlick mixt with Saffron, and applied to the Wrists. *Platerus* commends the inner rind of Hazle Branches steeped in Vinegar, wherewith he has cured several. *Cnassellius* commends the following;

Take of Cypress, Turpentine Ounce and an half, liquid Symplice half an Ounce. Melt them in a Copper Dish. Then take two large Spiders, bruise them, mix all in an earthen Vessel, and a wooden Pestil, till the Spiders no more appear, and the mixture look of an Ash-colour. Add the mixture, made warm a Pound of Powder of Toads, Gun Powder, Powder of Serpents Head, Sal Ammoniack each six drachms or an Ounce, common Salt, lesser Centaury each half an Ounce, Camphore two Drachms, Chimney Soot what is sufficient to tinge it. With Febrifuge what is sufficient make a Plaster for an exceeding black Plaster. Of this Mass make two robbins Plaster.

about the bigness of a
down piece, which must be cove-
d with leaf Gold or Silver, and
hour or two before the Fit
to the Wrists, and there
for nine days. Then at the
same hour they must be ta-
off, and thrown into the

also Juice of Nettle,
weed, or Plantain is good to
to the Wrists. The Herb *Ibe-*
is *Fludd's* experiment may
to the Soles of the Feet;
may the inner Rind of Wall-
steep in Vinegar. *Strobel-*
his Febrifuge Plaster of
Water and Earth, is good,
of Cob-webs, because they
the Air; of Soot, which is
by Fire; of Turpentine, be-
is Fluid; and of caustick
oot, which grows on the

the Liver of a Partridge with
water is a good Empirical
recruiting of Strength and
els, mixtures must be u-
temperate Cordial waters,
Crabs eyes, *Antiheli-*
and such like Preci-

pitants added in a due Preparation,
putting in a little Sugar of Pearl,
for the tast's sake.

You may find the cure of the
Symptoms in the last Chapter of
this Book.

A double Tertian is cured with
the same Medicines; yet with this
difference, that the Body must be
oftner purged in this than in a Sim-
ple Tertian; nor must the Sudori-
ficks be so strong here, as in the
Simple, because the coming of the
Fit every day weakens a Man much.
But since we are of opinion, that a
Quotidian and a double Tertian
differ not at all, we shall not treat
of it twice, but you may see a
Quotidian Ague.

In a Scorbutick Tertian where
Spots appear all over the Body,
and Pimples break out with pain,
Antiscorbuticks must be mixt with
Febrifuges: for instance;

Take of *Aqua Antiscorbutica* six
Ounces, Essense of Buck-bean
one Drachm and an half, *Elixir*
Antifebrile one Drachm, *Syrupus*
Scelotyrbicus one Ounce.
Mix them. Give a Spoonful on
the intermitting day, and before
the Fit.

C H A P. IX.

Of a Quartan Ague.

§. I.

NOW we are come to another sort of Ague, which is called a *Quartan* from the number of the fourth day, when it afflicts a Man. This disease is so Pertinacious and Refractory, that it is become a Proverb;

Hydrops, Quartana, Medicorum scandala plana.

And *Richardus* the Physician calls God, and all that is sacred, to witness, That he could never attain a competent Knowledge neither of Epidemical diseases, nor of Womens Conception, nor of a *Quartan Ague*. It has two days of Intermittion. The Ancients called it *Melancholica*, from the efficient Cause. *Pliny* calls it *Quadrjma*, from its fourth day Circuit. *Plautus* calls it *Querquera*. It is described to be a preternatural Effervescence of the whole Mass of Blood, afflicting the Patient every fourth day, with Shaking, Thirst and violent Heat, arising from a Febrile Ferment, lodged generally in the Vessels of the Spleen, which disturbs the Mixtion of the Blood.

This Ague is Simple or Com-

pound. Simple, when but one comes in one day. Compound when two Fits come every fourth day, as I observed in a Citizen of *Hanover*. I observed it also come in one Man at *Cassel*, every fourth and seventh day. The Compound also, which comes the intermediate days, and it is either double or treble. The double which intermits one day and comes two; that treble, which comes every day. One is called *patick*, which has its course in the Liver; that *Splenetic*, which has its course in the Spleen; and that *Stomachick*, which has it in the Stomach. But we admit not of this difference.

§. 2. Part affected.

AS in all Fevers and Agues, in a *Quartan*, the Heart is reputed for the Part affected; because the Heart was reckoned by the Ancients the Fountain of Life and Heat. For according to Galen, *de differ. febr. l. 1.* no quantity of heat can be called a Fever unless the Heart be hot. The Ancients reckon the Focus or subject of the cause, to be the Heart, sentery with its Vessels; and the Spleen, as it is the Fountain of Bile.

setting aside all Prejudice, think the cause lies in the Stomach, Pancreas and Spleen, which are reckoned the chief Lodging of the Acid, dirty, dreggy and earthy Matter. Nor do we here exclude the moving Parts and Vessels, the Chyliferous Ducts, when they are obstructed: from which Obstruction of so many Parts and Vessels, it cannot otherwise be, that the Acid must be encreased, and exercise its Tyranny every where. We have Helmont of our Age, *tract. de febr. c. 6. l. 9.* who shews, that the Spleen suffers under the Torture, if a Patient is so that it becomes the Lodging of black and retorrid Matter. He subjoyns, that its Seat is in the Body of the Spleen, but not in the Arteries, if not in all, at least in some, since this Part in all others abounds in Arteries. He does in this, as in other Places, acknowledge the Pancreas for the Focus.

3. Diagnostick.

LET us now see the Diagnostick Signs; some are common, others proper. The common Signs, which are in all Agues, are, Heat in the Head and Loyns, heat in the Stomach, thirst, yawning and reaching, a preternatural frequent Pulse, &c. They are proper Signs, as long as they are competent only to such Agues. In regard therefore of the Motions of cold and hot Agues, the Quartanary Circuit is an infallible sign of this Ague; so also the duration of time, the Fit holds a Man, there are other signs of this Ague; for

it lasts sometimes twenty, sometimes four and twenty hours, with a kind of sower Sweat. Those that have this Ague are very hungry, because of the Acid, and they have often a depraved Appetite, like those that long; their Body is dull and prospers little, their Strength is low, they are Morose, they chuse a sedentary life, they are great spitters, their Pulse is weak, because there is no Spirit in the Chyle nor Blood. Galen magnifies the Testimony of the Pulse, so that, *2. de cris. c. 4.* he Boasts, how to know by that alone, an Ague was at Hand, and that he foretold it would prove a Quartan: But *Campegius lib. 1. Hist. 9.* denies that this is possible to be done.

We must briefly also consider the Signs of the Subject or Febrile Focus. The signs of the Spleen being affected are reckoned to be, a leaden colour of the Body, the swelling of the left *Hypochondrium*, which *Sylvius* ascribes not to the Spleen, but to the *Colon*. The *Pancreas* also acts its part here, by its over acid Juice.

The Urine varies very much both as to colour and consistence, sometimes it is white, sometimes black, and sometimes inclining to red. In the Beginning the Urine is generally watry and crude, in the Process of the disease it is higher coloured and thicker, The Sweat is copious and stinking, smelling generally sower, which the Patients themselves usually loath. This Ague uses commonly to come in the Afternoon.

§. 4. Cause.

THE more exactly any one knows the causes of diseases, he may the safer, sooner and more pleasantly oppose Remedies to a disease, and to its Causes. We shall endeavour to find them out, and build the whole cure upon them, as on a Foundation. The *Galenists* make the immediate cause of this Ague to be a kindling of Humors in the Heart. The more proximate, mediate causes are with them Putrid Vapors, exhaling from a Melancholick Humor; which is fourfold. 1. Of adust Blood. 2. Of Salt Phlegm. 3. Of adust Bile. 4. Of a Melancholick adust Juice, like burnt Lees. Thus *Avicenna* will in this sense have a Quartan to be either Sanguine, Bilious, Phlegmatick, or Melancholick. *Hippocrates de natura hominis* will have a Quartan, as all other Agues, to come from yellow Bile, but mixt with black, where, he says, you may know it by this; because Quartans are caused by a Melancholick Humor.

§. 5.

THE *Chymists*, according to their Principles, hold, That a Quartan is produced of Nitro-sulphureous impurities. Some of them ascribe Quotidians to Mercury, and Quartans to the Element of Earth. *Quercetan* in a Quartan accuses Tartar, the common Enemy of our Nature.

Charleton, following *Willis*, shows, that in a Quartan, the Blood being spoyled of its sweet, spirituous and balsamick Nature, con-

tracts a certain acid, penurious a little austere Nature, as we Wine and Beer grow sowre, when the Lees are unfettled, and the Spirits depressed by Thunder. So the Blood degenerating from its native Purity, and being so full of sowre Dregs, as to fix Spirits, cannot rightly concoct nor at all assimilate the fresh Chyle that comes into it; but convert it into a strange Liquor, when the Vessels are full, a certain Fluor of this Matter ensues, and as it were a spontaneous Evescence, causing an Ague-Fit of cold and heat.

§. 6.

ACCORDING to *Helmont* on a Quartan Ague reaches further than the Stomach. In discussing of it he talks of the Arch of the Place, how in its own territories it commits an Error in digestion, which at set times shows its fury. According to him it suffers of it self, and returns perfectly again in a Month, and is cured naturally of its self. Sometimes he has seen it cured by a Crisp and many Stools. He derives the Original from an acid Chyle hurried into the Spleen.

§. 7.

ACCORDING to *Willis* the cause of this Ague is Blood degenerated into an acid and Austere Nature, like eager Wine, Ale or Tartar, consisting of more Earthy and Saline Matter, which almost a third part of Chyle is turned into a certain fermentative Matter, which ex-

Today is exalted with the Blood,
causes a new Effervescence.

§. 8.

Some think the cause of this Ague is Phlegm, sometimes glutinous and plentiful, because of the cold of the Winter and by which tenacious Pinlegm, that contumacious Obstructions are made in the lateral of the *Pancreas*, and that treble Quartans proceed from more of the lateral being obstructed at the time, but opened at several

§. 9.

THESE things thus considered, one would think none will doubt of the true and cause of a Quartan Ague: will therefore briefly give you, we think of the Matter. make no question therefore, in this Ague the Ferments are in quantity and more viscid; there are not only Obstructions of more Vessels, but more contumacious; and the Mixture of the Blood is disturbed. For the Enemy has not dissolved the Mass of Blood, has reduced all the rest of the parts, yea, the very Chyle, into an acid Paste, which being so must needs be attended with disorder in the Mass of Blood, and Parts of the Body. And hence, why the Fit comes so often, is the Viscidity of the Ferment coming to the Vessels of the *Pancreas*, and the Tenacity of the Blood, which slowly thither.

The condition of the *Focus* is the straitness of its Passages, wherein dull, tough and tartareous Particles are contained, especially in the chyliferous and other Ducts; for in a Quartan the saline Particles of the Chyle are exalted, which the Blood cannot conquer. For this Ague is generally produced by a vitious, acid Chyle. We learn, that there are these causes in a Quartan; because all Quartanary People have either a contumacious Obstruction in some of their Bowels, or a great loss of Tone and a Viscidity in all Parts designed for the first and second Concoction, or an acid Crudity gathered from viscid, acid, and ill figured Particles. For the slow coming of the Fits shews, that the Matter is very inept for Fermentation.

That in a Quartan something sharp is mixt with a very Viscid, and as it were immoveable Humor, appears from yawning, cold, shaking, and pain in the Bones, caused thereby; by which Symptoms first of all accompanying the Fit, it is generally distinguished from other Agues or Fevers.

The reason of the Head-ach is, because the thick matter sticks in the Capillary Veins, and cannot perform its Circulation. For the cold continues longer than in other Agues; because the Febrile Matter cannot so soon extricate it self and insinuate into the Blood, so as to ferment with it.

Rettlesness is produced by sharp, cutting Particles.

There is not always a Melancholick intemperature in this Ague, unless you understand by it a thick Matter, which if it be very thick and

and contumacious, the Agues become Sextans, Octans, &c. Because a thick Humor is not apt to ripen and break out, but rather causes difficult Obstructions.

As to the remote causes, they are either natural, as Complexion and Age, so that which we call a Melancholick Complexion, is subject to a Quartan. The Age most liable to it, is from forty and upwards, according to *Hippocrates* 3. *progn.* 28. Or Non-natural; of which we shall treat in the Dietetick Cure.

§. 10. Prognostick.

IF a Quartan come in Autumn, it will be the more pertinacious; because all the Humors in the Body are then more fixt: for the Spirits fly away in Summer; and so Quartans usually hold Men in Winter, and then a Cachexy, Dropsy, Scurvy, &c. may easily follow this Ague; because in time of Autumn, the Humors grow thick, the Bowels are weakned; and there is a loss of Tone in all the Parts designed for the first and second Concoction. A Quartan is seldom dangerous, especially in hot Countries; yet it is a tedious and slow disease; so that it lasts sometimes above two years; which I remember besel many, especially such as after an Epidemick disease, or a Malignant Fever, fell into it, as it happened to me at *Leyden* in *Holland*. Of it self it is not dangerous, as I said, but it may prove so occasionally, as it may end in grievous diseases, which I mentioned before; for it often ends in the Scurvy.

Hippocrates l. 1. *morb. vulgar. comm.* 3. *text.* 4. reckons up the

benefits of a Quartan. They are sick of it are never seized with any grievous disease; and if they be held of any grievous disease and a Quartan supervene, it cures them. We may instance in a Convulsion, from which Patients are freed by the coming of a Quartan, according to *Hippocrates* *Aph.* 70.

Children are more easily cured of it, than middle Aged, and Old Men.

Summer Quartans are usually short; Autumnal long, especially such as come near Winter; the more violent the Obstruction of Vessels is, the longer the Ague will prove.

Gabelcheverus cent. 6. *Obs.* gives instances of Quartans, that lasted seven, twelve, one and twenty, thirty, yea, forty eight years. It often goes off by Vomiting when abundance of crude Humors are brought up out of the Stomach. Ways. Sometimes it ends in a Convulsion by Sweat, thick Urine, Menstrues, Hemorrhoids, bleeding at the Nose, Abscesses, or Itch.

If a Quartan seize those, that have sound Inwards, and are strong, the case is safe. It usually goes off about the Solstice or Equinox.

When simple Quartans turn double or treble, they are dangerous.

Crato says well in *Epistolis* *Sebae* *zii consil.* 257. that a Quartan seldom ever goes off, but it leaves some Effects behind it. That which may be most feared by Quartanary Persons is Hypochondriack Melancholy, the Scurvy, or Dropsy.

I have often observed this Ague turn to the Colick: for this violent and corrosive Acid, having per-

the Mass of Blood, and got
the Membranaceous sensible
of the Mesentery, predomi-
there; and these corroding,
ing and pricking Particles in
of time rend and tear the
which being very sensible
contracted with a great distur-
of the Animal Spirits: and
convulsions are sometimes con-
from the Guts and Abdomen
parts.

A Case.

THE following case hap-
ped in a Gentleman's Wife,
by GOD'S blessing I cu-
This Gentlewoman was a-
six and thirty years old, of a
ick and Melancholick Com-
of a tender, lean and thin
She had been taken a-
five Months before with a
; but had put by the Fit
various Precipitants and Ab-
Yet there remained vio-
in her Belly, Watchings,
ing and Wind, which disten-
the Abdomen, Oppression at
at, and at last Swoonings;
she was even at deaths
she was successfully cured
Remedies, that shall here-
mentioned.

I. Dietetick Cure.

NOW we will look after the
Diet. Because all hope of
depends upon ordering it a-
for the choicest Medicines
little good, unless the Pa-
tience concur with the
diligence. The Aer there-
be moderately hot, pure,
it must be often chan-
a cloudy, marshy and
for Quartans are fre-
the Sea Coasts. The Au-

turn is very fruitful of Quartans;
if a hot Summer preceeded, and
the Autumn be rainy: for such
a Constitution of Air produces E-
pidemical Quartans; as it hap-
ned at Hanover, 1682.

§. 12.

THE Meat must be of good
Juice: at the Beginning of
the disease it must be small. It
may very well be tempered with
Borrage, Bugloss, Cichory, Parsly,
Capers, Cinnamon and Saffron:
Yet in process of time a fuller Diet
will be proper, lest strength might
fail; because it is a disease of long
continuance; as Hippocrates seems
to intimate, 1. Aph. 6. And the
time of Eating is better after the
Fit than before, as he shews 1. r.
Aph. 11. But mouldy Bread, Sea
Bisket, and the Flesh of great
Creatures must be forborn, espe-
cially if they be Old, such as Beef,
Brawn, Dear, Pork, Hare. But
*Quercetan dietet. polyhistor l. 3.
cap. 43.* undertakes to apologize
for Hares; and so seems Marti-
al l. 13.

*Inter quadrupedes gloria prima
lepus.*

So among Fowls these are held to
breed Quartans, viz. Geese, Ducks,
wild Pigeons, &c. All the Guts
and Extremities of Creatures are
reckoned of the same Nature. A-
mong Fish all such are hurtful as
live in Muddy and Fenny places,
such as Eels, &c. All Smoak-dry-
ed and powdered Meats are as bad
as Poyson, such as Gamons of
Bacon, dried Geese, Stock-fish,
Herrings kept long in Pickle. There-
fore all salt, fowre, viscid, glutin-
ous

nous and windy Meats must be forborn. Unripe Fruit is bad, such as Pears, Apples, Chestnuts and Wall-nuts; because they breed gross Blood, and corrupt the Chyle. All Pulse is bad, so is Rice, Beans, Pease, Lentils, Melons, Pumpions, &c. All things that are seasoned with Vinegar must be forborn: for Hippocrates 3. de ration. vict. acut. c. 38. knew long since, that Vinegar was not good for Quartans. On the contrary some allow of Vinegar in Agues, because it cools, and opens Obstructions. But we judge, that Vinegar ought to be forborn, unless we will foment the cause of the disease. The Drink must be the best Wine, and medicated also. Whey, Barley-water, and martial Spaws are proper. But a Decoction of Agrimony especially is a great secret in this Ague.

As for Motion and Rest, we advise the Patient to stir often, to ride on Horse-back and in a Coach.

Sleep and Watching must be moderate.

The Excreta and Retenta must be agreeable to Nature, The Belly must be loose, either by Art or Nature. The Hemorrhoids must keep their accustomed course: for they cure Melancholy, according to 6. Aph. 11. If they stop, they cause it. If the Menfes come not at the usual time, they must be procured, otherwise tartareous Humors are gathered, and the Acid encreases.

The Passions of the Mind are able to produce a Quartan: for fear, grief, fright, watching and cares, as they wait the Animal Spirits, and so occasion this disease, must be avoided.

Some say, that Quartanaries be cured with a sudden Fright, by unexpected throwing of Water, at the sudden sight of Serpents, or Mice, or by threats to throw them down a high Precipice.

§. 13. Pharmaceutick Cure

NOW we have done with the Dietetick Cure, we will proceed to the Pharmaceutick Medicine, out of which we may divers Weapons to destroy the Enemy. And we will go first to the Galenical. If therefore the Ague proceeds from a morbid bilious Humor, then they commend Moistners and Attenuants, but if it be any way adust, they advise Coolers, which Humors towards they will have to be corrected by proper Medicines. To clear the first Ways by Lenitives and Vomits: Afterwards, if Bile abound, they open a Vein, and if it be thick and black, they let more. When the Blood is corrupted, they say, the peccant matter must be prepared and concocted, and the disposition to breed Humors must be corrected.

If there is a mixture of Phlegm and crude Bile, they give Attenuants and Incisers at first; Broom-violets, Maiden-hair, Bugloss, Fumitory, Cichory, Spurge-wort less and larger, German Ground-pine, Agrimony, *Cardus Benedictus*, root of Mallow, Liquorice, Polypody, the opening roots, Bark of Tree-risk, root of Walnut-tree, Broomers and Seeds of Broom, *Castus*, Ash, &c. and they divers Medicines of these things.

§. 13.

THE Paracelsi and Hel-
montians brag of their Se-
crets. For Helmont after he has
laught at all the School-Remedies,
propounds an universal Febrifuge,
l. de Febris, c. 14. t. 7. and calls
it *Præcipitatum Diaphoreticum*
Paracelsi, or *Mercurius Diapho-*
reticus. Externally Helmont com-
mends a Plaster made of a
few Dissolvents and Absterfives, but
does not give its Description. But
these are commonly thought to be
its Ingredients, as you may see in
Grembs.

Take of Wax one Ounce, *Styrac*
Calamita two drachms, *La-*
danum Liquidum half an
Ounce, *Asa dulcis*, the best *O-*
libanum each three drachms. Mix
them, make a Plaster.

It must be applied to the Spleen,
whose *Archæus*, he thinks, is angered
by the Acid of the Stomach, that
he may be pacified by these sweet
scented things; for which purpose
he commends divers Unguents,
with which alone he maintains, a
Quartan Ague may be cured.
He boasts how one draught of
Arcanum Corallinum will cure
it.

§. 14.

VALLIUS advises Salivation
and Vomits in a Quar-
tan, and he gives an Example of
a Lady, who was so cured by him.
He adds, that this Ague may easily
be cured after the Winter Solstice,
and, that sometimes it goes away

of it self: because at that time the Dyscrasie of the Blood, contracted by the Summers heat, is almost gone off through the Winters Cold, and that old Mass of Blood begins like a Snake, to recover towards Spring. For, he says, the whole Cure consists in changing the Dyscrasie of the Blood. He says, all remedies are good, which stop the Fit. And he thinks the Fit may be stopt by giving Vomits before the Fit; because Vomits often stop the Febrile Motion of the Blood, by raising a Motion contrary to it. But, he says, those things are surest, which purge not at all, but for a time communicate a certain Fixation to the Blood, or cause a precipitation of the Febrile Matter. He therefore uses the following Method, having first given a Vomit or Purge three hours before the Fit; he applies Plaisters to the Wrists, and gives some Ague-Powder in generous Wine, and he orders the Patient to sweat gently in his Bed. He would have this repeated several times. Above all other things he magnifies the use of the Jesuits Powder, and gives about two Drachms in Wine either small or strong infused two hours. By hot Constitutions it may be taken in distilled Water or Whey.

He also examines the Qualities of the Bark; and because it is bitter, he makes no question but the same Virtue may be found in root of Gentian, Snake-weed, *contrajerva*, &c. For all things that are actually bitter, as he says, have an excellent Virtue in crushing the Strength of Preternatural Ferments. He exhorts others also to enquire out other Simple Medicines.

and they shall find that in which oftentimes Art cannot taste, towards the conquering of stubborn Diseases.

§. 15.

Spiritus, who reckons the of this Ague to be over-nous Phlegm, which breeds macious Obstructions in this other Agues, commends cines that cut glutinous Phlegm effectually, and the diligent of things that lessen the Obstructions are opened.

§. 16.

IT remains, that we **Cartes** and his Followers who may very well joyn with us. This therefore is Method in curing a Quartan: all our intentions of Cure be so directed, that the pre-natural Acid in the Chyle, and Ferments communicated to Blood at turns, may be corrected the Febrile effervescence of then that the crude Humors be regulated and made viscid, be cut and made fluid, and being so prepared may be carried by convenient ways, and the fine strength may be restored the Blood and Parts. things when they are duly there is Hope a Quartan cured effectually.

1. Therefore the Body kept loose, if not of it self, Clyster, or gentle Catharticther Pills, or the Powder following.

Blood-letting, because it depauperates the Blood and spoys it.

2. For conquering the preternatural Acidity of Chyle, and correcting the Viscidity of the Humors, and quieting the Effervescence of the Blood, I think Jesuits Powder is the best, given in this, or some such way;

Take of Jesuits Powder finely powdered six Drachms or an Ounce, Salt of Tartar two Scruples, Leaves of Wormwood, *Carduus benedictus* each one Pugil, the best old Rhenish Wine ten Ounces. Infuse them over Night ten hours in a warm place. Then filter it. Take four or five Ounces of it in the Morning, at four a clock in the Afternoon, and at Bed time, on the Intermitting days. Take a good Draught an hour or two before the Fit come, and again in the going of it off.

For the Poor you may proceed the same way with Gentian Root, *Guajacum* or *Contrayerva* Bark.

So also the Jesuits Powder may be given with Purgers or Sweaters: for instance;

Take of Jesuits Powder one Drachm, Scammony six Grains, Salt of Wormwood half a Scruple. Mix them.

The following Tincture of Jesuits Powder is not of contemptible Use.

of *Pilula Tartarea Querce-*
Melanagoge, *sine qui-*
each one Scruple, Oil of
each one grain. Mix them.
the Pills of a Grain in Weight.
fifteen or more at a time.

of Powder of Rheubarb
each one Scruple, *Pulvis Corna-*
each five Grains, Oyl of
each one Drop. Mix them.
a Powder for once ta-

let the Physick-Wine, or
be inciding and loof-
for instance;

of Root of Elecampane,
each two Drachms,
of Wormwood, lesser
each half a Handful,
of Mint, Marjoram,
each one Pugil,
of Senna three Drachms,
of Rheubarb two drachms,
of Orange, Tamarisk each
drachms and an half, Filings
in a Rag, or instead
of it, Vitriol of Mars one
drachm. Cut them and steep
in Wine.

such a Wine without the
may be drunk after Meals,
the bitter things especially
Febrile Ferments. I
not have any one take
except he be inclined to
ing, and the Stomach be
with tough Phlegm, and
be strong. Otherwise
do more hurt than good.
the German *Ephemerides An.*
30. I do not allow of

Take of Jesuits Powder three Drachms, Salt of Tartar one Drachm, with Spirit of Sal Ammoniack draw a Tincture.

According to *Willis* two Drachms of the Powder may be given in Wine two hours before the Fit comes. The extract of it or of Gentian may be given in Pills on the Intermitting days.

I know not what makes Physicians fear a Hectick Fever so much from the use of Jesuits Powder; since a Hectick comes from a Blood or Nutritious Juice, grown too sower, and unfit for assimilation to the Parts, and therefore requires Medicines to correct an Acid. You need not therefore fear it. But if you be overcome with Prejudice, you may be often giving of Gentian root in lesser Centaury Water before the Fit, and now and then interpose the use of volatil Spirit of *Sal Ammoniack*, which I have found excellent in a Quartan. In a contumacious Quartan the following Powder will do good.

Take of Salt of Wormwood, *Arcanum duplicatum*, Crabs-Eyes prepared, volatil Salt of Hartshorn, Amber each six Grains, *Laudanum Opiatum* three Grains. Mix them for three doses.

Or according to *Sylvius* his way, this or the like Mixture may be given to incide the Viscidity.

Take of Water of Fenil, Fennel-seeds each one Ounce, Tincture of Cinnamon three Drachms, Oyl of Cloves ten Drops, Spirit of *Sal Ammoniack* twelve Drops, Syrup of *Carduus benedictus* six Drachms. Mix them.

One Spoonful of Spirit of Wheat, with a little Oyl of Olive commended as a present Remedy for a Quartan Ague: Because Oily things imbibe an Acid.

All Martial Absorbents are good to check the preternatural Acid of the Chyle. Natural or Artificial Spaw Waters are good, Spirit of Vitriol of Mars may be dropt into ones usual Drink. Several commend a Martial Vomitory and they say, that *Riverius* Antiquartan was made of Antimony and Mercury. All Antimonials and Saturnines, both Minerals, Animals, and Vegetables are good. An excellent and sure Antiquartan may be made of a Martial Earth. I have had good Success from this following;

Take of Ceruss one Drachm, Armenick one Scruple, Oyl of Cloves ten Drops. Mix them. Make a Powder. Divide it into four Doses. Give one before the Fit in some convenient vehicle.

Take crude Antimony and Salt of Tartar each a like Quantity. Make them run in a Crucible, let the Mass grow hard. You may safely give a Spoonful of the Powder.

All things with Myrrh in the

good here, which *Matthiolus* who commends a Drachm in Wine of *Crete*, given three times an hour before Bed. and the Patient must then in Bed. He writes how he himself, by this Medicine. *in lib. prim. Dioscoridis*, Here is a Receipt;

of Myrrh half a Drachm, Extract of Wormwood, Gentian, lesser Centaury, Treacle, *benedictus* each one scruple, Oyl of Cloves four drops. With a sufficient Quantity of Essence of Wormwood make Pills of a Grain each. Give a Scruple or a Drachm for a Dose.

Antiquartanary Tincture is the only Relief several kind; which I shall commend to the Curious, because of its Excellent Virtues;

Extract of Jesuits Powder of Gentian, lesser Centaury *benedictus*, Treacle each one Drachm. Pour to it Spirit of Tartar well separated from its Water, and Spirit of Sal Ammoniack. Make a Tincture. The Dose is from ten to Forty Drops every day; but especially before the

Absorbents which were mentioned in the Chapter of Absorbents may be here made use of. Numerous Medicines sometimes the whole Business: for

Take of burnt Alum one Scruple or half a Drachm, Nutmeg half a Scruple. Mix, and give it before the Fit.

Volatil Spirits are good in Quartan Agues, especially combined with an Opiate. So are fixt Mercurials.

We recommend likewise the Tincture of *Lapis Lazuli* drawn with the urinous Spirit of Sal Ammoniack.

Tincture of Saturn with Tartarizate Spirit of Wine, or *Arcanum Tartari solut.* is of great use in a Quartan

Without doubt all Diureticks and Sudorificks are good here, as in all Fevers and Agues.

Out of the Fit all such things are proper, as restore Spirits to the Blood; remove Acidity from the first ways, and drive it into the Blood, and such as dilute, Whey, &c. *Crato* commends a Decoction of Turnips for a Specifick. Hither belong opening Infusions of Splenetick Medicines and Mars.

Tempering Absorbents, especially Martial ones, as was said, must here be made use of, such as *Pulvis cachecticus Quercetani*, *Tinctura Martis*, *Arcanum Tartari*, *Elixir Febrile Spiritu Salis Ammoniaci paratum*, *Clyffus Antimonii Salinus*, *Tinctura Antimonii Tartarizata*, *Elixir Album Helmontii*, Sal Ammoniack mixt with Salt of Tartar is excellent good: for an Antiquartan Spirit may be distilled of them.

Five grains of *Aurum fulminans* given in this Ague is a Secret.

For corroborating the *Viscera* and the Strength, and for the better Amendment of the peccant Acidity, mixtures must be made use of, made of temperate Cordial Waters, Pearl, Crabs Eyes, *antihæcticum Poterii*, Coral, Mother of Pearl, and such like Preparations, that imbibe an Acid, being added in due proportion, for taste sake adding a little *Saccharum perlatum* or *rosatum*. Here is a Receipt;

Take of *Aqua confortativa* three Ounces, Water of Cinnamon half an Ounce, *Scordium* one Ounce and an half, prepared Pearl (but for the Poor, prepared Crabs-Eyes or Harts-horn) one Drachm, Sugar of Pearl, as much as will make it grateful.

For which end, divers Electuaries, Conerves, Preserves, &c. may be made. For when a Quartan is gone we must not then presently leave off Medicines; but we must insist upon Martial, bitter, and other aperient, diuretick, saline, antiscorbutick and splenetick Medicines. Spaw Waters will be good. So Whey drunk for a time with juice of Fumitory and Brook-lime is a generous Remedy.

It were tedious to mention all Medicines which might do good: We shall therefore proceed to Externals. Nettle Roots, according to *Crato*, applied to the Wrists, do good. He also commends an Epithem of Spirit of Wine, applied to the Stomach.

Amulets, according to the received Custom among the People,

some of them are more stitious than wholsom, are not so superstitious but wholsom.

Trallianus hangs a live tied fast in a yellow linen about the Neck.

He commends also a Lizard, the Nails of the Paw and the Hairs of a Beard.

Platerus above others commends some Amulets as tain, namely, a Spider hung about the Neck in a Hazel to wear a Jasper or Snail Shell or to hold a Mole in ones till it dyes.

Rondeletius orders Leaves Sage, Elder, Doves-foot, each half a handful, Mar one Pugil, bruised with a Salt and Wine, to be tied the Wrists, before the when Signs of Coction pear.

Some affirm, that after boiling of an Egg for some hours a Quartanary Person's U then pricking it full of and putting it in an hill, the Ague ceases.

Crato Epist. med. Scholæ relates this following Pa *Simon* the Baker's Son had ill three years of a Quartan and he told me, he had several Remedies, but this ly did him good. He *Aqua Vite*, and wet a T first, and applied it to his mach, when the Quartan coming. A Tench is split the middle, and applied to Soles of the Feet in Agues an excellent Remedy. And *cetan* applies the same to Wrists.

cry up for a certain
three Roots of Plan-
gathered before Sun-Ri-
hung in a Bag about

People are despe-
run to Charms. But
extream dangerous; and
want not Instances of
cured by Witch-
which have proved Fa-

and other Amulets al-
frustrated my Expe-
Yet according to *Willis*
divers things may
purpose be applied to
rits, and those are A-
which I have men-
before, and therefore
not now repeat. But
I proceed any further, I
take notice of one thing,
when I had tried the a-
Amulets in my self
purpose, one of nine
Herbs with *Panis Fu-*
and Salt did me good.
am still doubtful to what
ascribe the Effect, since
some time I used other
herbs, but no Fit came,
I hung this Amulet about
neck. It answered my end
in others; but in others
not. Divers topical Medi-
caments, and Oyntments,
be outwardly applied to
stomach, *Hypochondria* and
to wit Oyl of Scorpions,
rectified, *Emplastrum*
de Hyascyamo, and
Unguentum. The Back may
be anointed with *Balsamus*
de Sassafras. A pickled Herring
in the middle may be ap-

plied to the Back, or the Loyns
may be rubbed with Garlick.

*Ferrara in Observat. Chi-
rurg. Observ. 49.* wonderfully
commends this following, where-
with the whole Chine must be
anointed, beginning at the Nape
of the Neck, and proceeding
to the Os Sacrum.

Take of Oyl of Bays, Fox,
de Euphorb. Spike, Nut-
meg, Turpentine each two
Drachms.

These things premised we will
see what empirical Specificks
there are. Some magnifie a
Decoction of Clubmoss; others
of Broom.

Some commend the Root of
Mullein. *Cardan* commends the
Juice.

A Drachm of Master-wort root
powdered, and given in a
Draught of Wine, before the
Fit, and several times repeat-
ed, does not only mitigate
the Fit, but often takes it quite
off.

The Heart of a Hare was
formerly tried by *Diomedes*
Cornarius, approved by *Mo-
navius* and *Andreas Hilde-
brandus*, and is still com-
mended by others as a Speci-
fick in a Quartan. It is be-
lieved to do good, hung about
the Neck.

The Hoof of a Seal, or its
Heart, worn on the Arm, or
about the Neck is thought to
cure a Quartan.

Oyl of Scorpions applied to the Back an hour before the Fit, stops it.

A Drachm of *Castor* taken in the Fit, is said to cure Quartans.

If you hang the Heart of a Salamander about the Aguish Persons Neck, they say, it will cure a Quartan presently.

Some say, that Spiders Eggs,

tied in a black Cloth, and plied to the left Arm, cures a Quartan; and so do foot them drunk.

The Liver of a Doe roasted and eaten, they say cures a Tertian and Quartan. But who is able to count all things, since every one imagines he has a Secret for a Quartan Ague?

Of Symptom

§. I.

Whereas diseases are termed Agues, which are attended with a shaking of the body, has given them their Names from the Symptom.

They are either
Epiala, *Fastidio*,
Hungry, *Ca*,
Sweating, *Ch*,
Coughing,
Emetick,
Swea,
Puffing, *Spitt*

at Fever or Ague, wherein no Heat is only troublesome from a sharpness in the Motion.

CH A

That is called
 no Cold,
 Shivering pre
 violent Heat
 from sharp
 is called
 an *Epiala*.
 That appear in
 The Thirsty is

C H A P. X.

Of Symptomack Fevers and Agues.

§. I.

Hereas divers Symptoms attend these Agues, which we have ting of, the famous is given the Fevers and ir Names from the most mptom.

re either *Chill*, *Bur-*
ex, *Fastidious* or *Assodes*,
hungry, *Cardiack*, *Grip-*
ping, *Choaking*, *Asth-*
Coughing, *Arthritick*,
metick, *Cacatory* or
k, *Sweating* or *E-*
ling, *Spitting*, or *Odon-*

ever or Ague is called
erein no Heat is observed,
troublesome Cold, a-
n a sharp, viscid Acid,
the Membranes and

is called *Burning*, in
o Cold, but only a
eering precedes, and a
dent Heat follows, a-
om sharp, sulphureous

Epiala, both Cold
appear in a violent De-

thirsty is so called from

the violent, unquenchable *Thirst*; as the *Hungry* is from unsatia- ble Hunger, even in the time of the Fit. The *Fastidious* from the Loss of Appetite. The *Cardiack*, from the unspeakable Pain, or Heart-burn about the mouth of the Stomach.

The *Gripping* is so called from the Colick, that attends it, arising generally from a Distur- bance in the Blood, and an acid Raging about the Nervous parts of the Mesentery, and rending and tearing the Fibres.

The *Swooning* is so called from Swooning, which is cau- sed by a great Disturbance in the Blood, and other Causes, which shall be hereafter mention- ed.

The *Choaking* Fever is so cal- led from the urgent Symptom, when a Man seems to be choak- ed by an austere Juice, carried to the *Oesophagus*, *Trachea*, or *Lungs*. It is called *Asthmatick*, when usually viscid Phlegm op- presses the Stomach.

A *Coughing* Fever is attended by a Cough, which is caused u- sually by the Acrimony of the Fever.

Arthritick Fevers have a vio- lent Pain in all the Limbs and Joints

Joynts attending them.

A *Mad Fever* is attended by a *Delirium*, which is caused by the disturbed Mixtion of the Blood, and a Disturbance in the animal Spirits ensuing thereon.

It is called an *Emetick Fever* wherein there are enormous Vomitings produced generally by a Spasmodick Contraction of the Stomach.

A *Cacatory Fever* is attended with a Loosness, caused by a volatil and over sharp Bile.

A *Sweating Fever* is called *Elodes* or *Marshy*: because Patients perpetually swim in Sweat. Some call it *Causus Spurius*, or the *Sweating Sickness*. It was Endemick in England. Some call it *Febris Colliquativa*.

A *Pissing Fever* is attended by a *Diabetes*.

A *Spitting Fever* has a great Salivation attending it. Some call it *Salivary*. It comes from disaffected Glands.

An *Odontalgick Fever* is attended by the Tooth-ach.

§. 2. Part affected.

WE need not say much of the Part affected because the very Denomination designs the Part affected.

§. 3. Diagnostick.

Since these Fevers may easily be known by the concomitant and urgent Symptom, it would not be worth the while to say any more of the Diagnosticks.

§. 4.

§. 4. Cause.

THEN we know a thing says *Aristotle*, when we know its Cause, wherefore if we may come to the exact knowledge of Symptomack Fevers we will search their Causes.

Cause of a Chill Fever.

THE Ancients reckoned the Cause of a Chill Fever to be tough and cold Phlegm. *Sylvius* will have it to be, the Pancreatick Juice, with abundance of viscid Phlegm, the Bile being cold. *Delmont* says, That only the *Archeus* is the efficient Cause of Cold. But we say, That in these Fevers there are sharp and viscid Particles, which sticking fast to the Membranes and Fibres all over the Body and vellicating them with their Acrimony, cause Cold and Shivering, as the Soul judges; because it never observed such Motion proceed from any thing but from Cold.

§. 5. Cause of a Burning Fever.

THE old Galenists thought Bile and inflamed Blood was the Cause of a burning Fever. The *Chymists* and *Moderns* think it is, sulphureous Particles that kindle the Blood. But according to *Sylvius* the Cause is a Pancreatick Juice not sharp little Phlegm and not viscid, but abundance of sharp, oily Bile. We reckon the Proximate Cause

is Disease to be the hottest
of the Blood, abound-
with inflammable Bile, and vo-
Salt, which cause such a
Heat: Nor do we ex-
here the furious Influx
animal Spirits into the

6. Cause of an Epiala.

THE *Galenists* make the
Cause of an *Epiala*, where-
in the Patients are violently hot, and
at the same time,
sometimes Phlegm and
Bile; for from pu-
Phlegm and Bile they de-
Heat; and from imputrid
excessive Cold. *Sylvius*
the Pancreatick Juice and
Bile, so that the Heat of
concurr with the Cold
other. But we think that
a Fever (if there be any
there are unequal Disposi-
of the Blood and of the
Ferment, enclining some-
to one part, sometimes to
the other, as when the febrile,
Particles are carried to the
of the Body, Heat is pro-
duced there; but if they are
equally figured and propor-
tioned, they seem to produce
no Fever. For often there is a Fal-
lacy in the Sense, because the
Patients use to feel cold, though
Fermentation is high, the
Heat is vehement and great, and
the Body feels cold to the very
extremities. And these things happen on-
ly from the Acrimony that velli-
fies sometimes these, some-
times the other Fibres and pro-

duces a Sense, sometimes of Heat,
sometimes of Cold. So likewise
these sharp Particles get predomi-
nance in the Stomach, and cause
an *Affodes*, or Vomiting Fever.
These Particles also often get into
the Folds of the Stomach and
by corrugating it, and spasmodi-
cally contracting the Fibres of
the gall Bladder, marr its Juice,
by pouring out the Bile; where-
upon they are taken with a Vo-
miting Condition. And this Vel-
lication proceeds from a perverse
Motion of the animal Spirits,
which being Disordered are apt to
cause Convulsions. So *Sylvius*
says, That in this Fever volatil and
sharp Bile rises to the Stomach,
and thereby causes Vomiting.
Willis thinks this cruel Vomiting
is caused, when Fermentative Seeds,
being put in Motion, are dischar-
ged by the Arteries, that open into
the Coats of the Stomach, at
every appulse of Blood, and
cause Vomiting; just as if one
had swallowed Particles of *Sti-
bium*.

§. 7. Cause of Thirsty Fever.

THE old *Galenists* blame Bile
and its Vapors, which rise
to the Throat, and cause driness
there, as the Cause of Thirsty Fe-
vers. *Wilmont* holds, that Thirst
does not arise from Heat in the
Mouth of the Stomach, but ra-
ther from an Excrement, which
disaffects the Sensory. *Willis* thinks,
that sulphureous Particles are car-
ried to the Throat. *Wille* hold,
that in these Thirsty Fevers, ma-
ny Saline Corpuscles are carried
to

to the Throat and beset its Coats, so that all Passage and Intercourse of Vapors, designed by provident Nature to moisten the Nerves of the Throat, is stopt: and hence an unquenchable Thirst must of necessity follow.

§. 8. *Cause of Hungry Fevers.*

HELMONT says, the Cause of Hungry Fevers proceeds from the Spleen. SYLVIUS blames the Pancreatick Juice, grown sower, by Reason of its Stagnation. We derive Hunger from any preternatural Acid, which kindly affects the Fibres of the Nerves in the Mouth of the Stomach.

§. 9. *Cause of a Fever with the Heart-burn.*

THE Galenists lay the Blame of a Cardiacal Fever upon the four Humors; but especially upon vitious Bile, carried to the Mouth of the Stomach. With HELMONT corrosive Salts, which fret the Stomach, are the Cause. With SYLVIUS it is the Pancreatick juice, grown sower by Stagnation, especially if sharp Bile do concurr. We also do blame in this Case, sharp, saline Particles, discharged by the Mass of Blood, or Lymphatick Vessels upon the Orifice of the Stomach, which there pierce and rend the Fibres and so cause the Heart-burn.

§. 10. *Cause of the griping Fever.*

THE Galenists, after the usual way, derive the Cause of a griping Fever from the Humors, separated upon Occasion or other in the Guts or from Wind that distends the Guts and the Belly. SYLVIUS says it proceeds from an Acid. HELMONT says, the Cause is Pancreatick Juice, being too sower or austere; or Wind. SYLVIUS thinks, that neither yellow or green Choler is the Cause, but that the Nervous Liquor is the fault, which sticks in the Mesentery and its Folds, ferments there and causes Gripes and Tortures and Convulsions in several Membranous parts, or Pains altogether. We reckon these Causes of Fevers arise, when a Ferment or Acid, bred by the disturbance of the Blood, fortifies the Mass of Blood, is poured upon the Membranous Sensible parts of the Mesentery, and by Stagnation becomes as it were corrosive so frets the Fibres and causes convulsions in the Guts, sometimes continues them to other Parts.

§. 11. *Cause of a Swooning Fever.*

THE old Galenists say, the Cause of a Swooning Fever is Defect of animal Spirits, arising from a various Disposition of Humors. HELMONT thinks it is some narcotick, dispersive

§. 12. Cause of choaking Fevers.

THE ~~Antients~~ ^{Ancients} derive Choaking Fevers from gross Phlegm, besetting the *Bronchia*, and sticking in the first Ways. *Sylvius* blames austere Vapors rising to the Gullet, Heart, and Lungs, and Wind. ~~We~~ ^{We} think, if there be an Oppression at the Heart, it is a Sign the Stomach is beset with thick Phlegm; or that its Membranes are clogg'd with it. Nor do we exclude austere Vapors rising to the Throat.

§. 13. Cause of Asthmatick Fevers.

THE ^{Ancients} say, the Cause of an Asthmatick Fever is thick Phlegm, lodged in the passages of the *Aspera Arteria* and the *Bronchia* of the Lungs, which is sometimes translated thither. *Paracelsus* seems of that Opinion. But *Helmont* places it in the Stomach, and blames mucilaginous Matter gathered there. *Sylvius* will have the Cause to be a viscid Phlegm dissolved by the Pancreatick Juice, and carried to the Lungs. ~~We~~ ^{We} do not question, but many viscid Excrements are bred by the disturbed Mixtion of the Blood, and its cacochemical Dispositions, which are carried to the Lungs or their *Bronchia*, or to the Stomach, and there cause an *Asthma*. So an Acid, by coagulating the Blood in the Pneumonick Vessels, and stopping

stopping its Circulation, may hinder Breathing. And so may a Disorder in the animal Spirits.

§. 14. Cause of a Coughing Fever.

THE Galenists say, the Cause of Coughing Fevers is, Vapors dissolved by the Febrile Heat which ascend to the Lungs, or condensed Vapors dissolve, and fall from the Head upon the Lungs, and raise a violent cough there. *Paracelsus* holds, that a cough proceeds from Tartar, or a dissolved mucilage in Fevers. So *Wilmont* makes it to come from a salt Excrement separated by Fevers. According to *Willis*, a Cough is an Irritation of the Nerves or Fibres of the Lungs by any thing Heterogeneous. *Sylvius* makes the Cause to be, sharp Exhalations and Vapors carried to the Lungs, and provoking them to cough. *Carrus* blames sharp Particles coming from the Mass of Blood, which vellicate the *Aspera Arteria* and Lungs, and so cause a Cough. We think, the Cause of this Fever is foreign Salts, or sharp viscid Humors, which hang about, vellicate and rend the Tracheal Fibres; yea sometimes make them convulse, and so raise a Cough. So its seat may sometimes be about the Spleen, in the *Intestinum duodenum*, yea in the Stomach, where the viscid Matter that is separated, may lodge. A Cough may likewise arise from a *Scorbutick* Blood, which irritates the Lungs and Tracheal Fibres.

§. 15. Cause of Arthritick Fevers.

THE Galenists say, the Cause of Arthritick Fevers is a Deflux of a bilious Humor to the Joynts. *Paracelsus* blames Tartar, *Wilmont* questions, but this Fever has its Rise in a Febrile Acid, which infects *Archeus*. *Willis* holds, the Pain proceeds from the Fermentation of two Humors. *Sylvius* blames the Pancreatic Juice, which is so corrupt, that it is troublesome to the Joynts. For if this Juice have Acrimony in it, it will carry the Bile with it, and cause violent Pain; but if it be not altogether sharp, it carries Phlegm, and causes an oedematous Swelling. The *Cauterians* blame Saline Particles, discharged by the Mass of Blood upon the Joynts. We lay the Fault on any of the Faculences, which are apt to corrode the Membranous and Nervous parts, the Ligaments, the *Periosteum*; which Faculences are, at the time of the Fever fit, precipitated to the Joynts and there produce a throbbing gnawing Pain.

§. 16. Cause of a Mad Fever.

THE Galenists make the Cause of a Mad Fever to be, an abounding and poured into the Brain, sometimes enraged, causing a great inflammation, sometimes adust Bile. *Paracelsus*

this Fever arises from the
 tion of the Spirit of Life
 must thinks a Febrile Dross
 the *Precordia*, and being
 the Nature of Poyson, tyrann-
 ize, and causes Mad Fevers.
 says, these delirious Fe-
 are produced by the Confu-
 and Irritation of the Animal
 According to *Sylvius*
 Cause is, a sharp Bile, made
 upon meeting with the
 Pancreatic Juice, whereby vitious
 Spirits are produced,
 move turbulently, and
 of necessity cause Mad-
 we think, it is sharp
 arising from a great Per-
 tion of Blood which get
 the Brain and cause Delirious.

tion and vellication cause a Flux.
 And ~~we~~ are of the same Opin-
 ion.

§. 18. Cause of a Sweating Fever.

THE Cause of a Sweating Fe-
 ver, according to the Ancients,
 is a Fusion and Colliquation of
 the Humors. According to *Syl-
 vius* it is a Pancreatick Juice more
 volatil than sharp. According to
~~Willis~~ the Cause of this Disease
 consists in a Dyscrasy and Debility
 of Blood, inasimuch namely as its
 Liquor, like sowre Milk, is conti-
 nually apt to run to Whey, and
 then its own Serosity, and any other
 Humors that are mixt therewithal,
 since they cannot be assimilated,
 are presently voided; and because
 the Pores of the Skin are very o-
 pen, they are discharged rather
 by Sweat than any other Way.
 And the Reason why the Blood is so
 disposed to Fusion, lies in the
 Predominance of a fluid Salt, or
 an Acid in its Mass, and sometimes
 in a degenerate nervous Juice.
 Our Cause is, an over high Circula-
 tion and Fermentation of the
 Blood, which, as it were, melt
 the Blood. Urine and Sweat a-
 gree in several Regards. The
 Suppression of the one encreases
 the Discharge of the other. Now
 the Reason why the Urine is
 stopt, is because the Nerves of
 the Reins are too much straitned,
 and hereupon their Fibres are
 corrugated, and the transcolato-
 ry Orifices are shut, which
 Spasm, when it abates, all is in
 due order again. But if these
 transcolatory Orifices be too open,
 either,

§. 17. Cause of a Fever with a Loosness.

Galenists in a Fever with
 Loosness blame bad, cor-
 Humors, especially Bilious
 stimulate the Guts to ex-
 Paracelsus blames a
 salt, which by its Acridi-
 tates the Stomach, but
 ly the guts. *Wilmont* blames
 tion. *Willis* thinks, that
 sharp, serous, and bilious Hu-
 do often suffer a Flux in
 of Blood, and so are
 zed by the Guts, and cause
Sylvius here blames the
 not volatil enough, and made
 sharp upon its meeting with
 creatick Juice. The *Car-*
 hold, that in these Fevers
 store of Humors in the
 are precipitated towards
 Guts, which by their irrita-

either, because abundance of *Serum* is separated from the Blood, and precipitated to the Kidneys; or because the Vessels, running through the *Omentum*, are too wide, so that potent Matter may pass that way to the Bladder, then a Diabetick Fever may easily be produced.

§. 19. Cause of Spitting Fevers.

THE Ancients in Spitting Fevers blame almost all Parts of the Body; but especially the Spleen. *Sylvius* says, the Cause is, a Pancreatick Juice, so corrupt, that it flows in abundance to the salival Glands. I do not at all doubt, but in these Spitting Fevers the Glands are affected. For we see in Children, that are troubled with Driveling, how hard the Glands are all about the Neck; therefore the salival Glands receive all the serous Superfluities; because the rest are obstructed, and cannot.

§. 20. Cause of a Fever with the Tooth-ach.

I Think, the Cause of an Odontalgick Fever is an Acid, sometimes very small in Quantity, which pricks, corrodes, and painfully irritates the nervous and fibrous Root of a Tooth. For in a short time not only that side of the Face and Temples; but the whole Head akes, a manifest Sign of the Spasm of the Fibres. Then arises an inflammatory or œdematous Swelling, with a copious Flux of limpid

Spittle, squeezed by the pericious Contraction of the nervous Fibres immediately out of Glands, and mediately out of Blood-Vessels.

§. 21. Prognostick and Cure.

AS to the Prognostick Diet, they may easily gathered from what has preceded. We shall not therefore use tedious Repetitions but proceed to a succinct Cure; and first of all, of a Fever.

§. 22. Cure of a Child's Fever.

THE *Galenists* say, that the and tough Phegm must be atenuated and cut; to this end commend divers Purgers, Incisive Preparers, and especially aromatick and sharp things. *Sylvius* for the Acidity of the Pancreatick Juice, and for cutting of Phlegm uses divers volatil Salts, and a manner of Aromatics. To what purpose he commends the following, or some such Mixture;

Take of Water of Parsly two Ounces, Fenil one ounce, *Theriackalis simplex*, or *Matthioli* one Ounce and half, volatil Salt of Amber Scruple, Syrup of *Carduus benedictus* one Ounce, Oyl of Cloves three Drops.

For the Author never had opportunity to observe, that any

Cold better, than Oyl of
which as long as the Cold
may be given three or four
in an hour in some mixture.
Questions not, but
mixt with Oyl of Cloves,
do good. ~~Use~~ in all Agues
where there is Heat and
to prescribe this following
good success.

Treacle two Drachms, *Spe-*
Siropetbergeri half a
Oyl of Cloves two
Mix them, make a Bo-

all volatils joyned with Opi-
to the business. All manner
Aromaticks will do good.
in the beginning of the Cold
Febrifuges may very well
with Aromaticks. This is
cellent Medicine for the com-
in Agues.

white or long Pepper nine
Oyl of the same, or of
two Drops. Mix, and give
Wine.

you mix a Grain or two of
caelestis, you will have an
remedy. While the Cold
upon one, destilled Oyl of
applied to the Epigastrick
gives ease, and abates the

Cure of a Burning Fever.

Galenus in burning Fe-
commends bleeding and
remedies. *Synus*, to
the Heat and concomitant

Symptoms, prescribes the following
Apozem;

Take of Roots and Leaves of Sorel
two handfuls, leaves of Straw-
berry, Violets each one handfull.
Boyl them in Barly Water. To
ten ounces of the colature, add of
Syrupus acetositis citri, three
Ounces, *Spiritus salis dulcis* half
a Scruple. Mix them.

~~Use~~, to temper the Acrimony of
the Bile, that is, to correct a volatil
acid, more or less oily in the Blood,
recommend this following;

Take of Water of Sorel, Plantain,
Wood-Sorel, Flowers of red
Poppy each one ounce, *diascor-*
dium one Drachm and an half,
Spiritus nitri dulcis, or *Salis*
dulcis, from half a Drachm to a
whole, Syrup of Purslain three
Drachms. Mix, and give it at
several times.

Or we may give the following
Julep;

Take of a Decoction of *Scorzonera*
root one pound and an half,
tincture of Roses one Ounce, of
Daisie one Drachm, Syrup of red
Roses three Drachms, Spirit of
Vitriol, as much as will make it
grateful.

When the Tongue and Mouth
are dried and furred, the Mouth
must be washed, and the throat
gargled with the following mixture;
or it may be held warm in the
Mouth;

Take of Water of Houfleeck, Self-
Heal each eight Ounces, fresh
M in m Juice

Juice of River Crabs four Ounces,
Sal Ammoniack purified one
Drachm and an half. Mix them.

§. 24. Cure of an Epiala.

IN Fevers, called *Epiala*, Medi-
cines made up of the aforesaid
contraries will be proper. To
which end *Sylvius* commends the
following mixture;

Take the Water of *Carduus bene-*
dictus, Cichory each one Ounce
and an half, simple Treacle Wa-
ter six Drachms, destilled Vine-
gar six Drachms, Crabs Eyes
Powdered half a Drachm, Syrup
of the five opening roots one
Ounce. Mix them.

This following may also be given;

Take of Water of Borrage, Bugloss,
Raspberry each one Ounce and
an half, Crabs Eyes, Coral pre-
pared each half a Drachm, Sugar
of pearl, what will make it grate-
ful. Mix, and give it by spoon-
fuls.

§. 25. Cure of Thirsty Fevers.

THE Ancients used to pre-
scribe several Juleps, for
quenching the thirst. They also
commend all Watry and Cooling
things, of which the number is in-
finite. *Sylvius* commends this
following;

Take of Barly Water twenty Oun-
ces, Syrup of Purlain two Oun-
ces, *acetosiratis citri* one Ounce,
Spiritus salis dulcis half a
Drachm. Mix them.

For a parched and dry Thirst
he commends mucilage of
Seeds, and *Psyllium*. In
thirst and heat the following
some such like mixture will be
per;

Take of Spring Water two Parts
Cinnamon Water half an Ounce
fresh Juice of Citron one Ounce
and an half, Syrup of Raspberries
which is sufficient to make it
grateful. Mix them.

Lapis prunella, taken in Wine
quenches thirst well. All Tar-
Watry things may be here made
of. So the Mouth may be washed
with Water, and a little Vinegar
Wine added to it.

§. 26. Cure of a Hungry Fever.

TO stay Hunger, which
tens fainting, all things will
good, which powerfully mix
and concentre an acid; such as
Crabs Eyes, Pearl, Coral, &c.
powdered, and about five
Grains put in some convenient
ture or vehicle. If you put
Oyl of Tartar *per deliquium*
mong other things, you will
tainly cure it.

§. 27. Cure of a Fever with the Heart burn.

IN Cardiacal Fevers the Gal-
lics commend divers Stomach-
Cordials, &c. which have been
mentioned before. *Sylvius* in
Cardiacal Fevers commends
Opium. When we have
sufficient

§. 28. Cure of the Gripping Fever.

WHat Medicines the Physicians use in these Fevers, has been mentioned in the Chapter of the Colick, where you may see what several Authors use. Sylvius in Gripping Fevers, among other things, commends the following mixture;

Take of Water of Mint, Fenil, Parsley, Scurvy-Grass each one Ounce, Spirit of Nitre ten Drops, laudanum Opiatum three Grains, Spirit of Sal Ammoniack one Scruple, Oyl of Aniseed six Drops, Syrup of Fenil one Ounce and an half. Mix them.

In Our Opinion all Cinnabarines, Anodynes, and Castorines, are good in Gripping Fevers; because they perform every tittle of the Cure: for they are Antispasmodick; and also respect an acid: for instance;

Take of *tinctura bezoartica* one Drachm, *Spiritus salis Ammoniaci castoreatus* half a Drachm, *essentia Anodyna* one Drachm and an half. Mix them. Give it to forty Drops.

To this end also *cephalicum Michaelis*, *liquor cornu cervi succinatus*, *nervinus*, and our *elixir polychrestum*, made of our Alkaline, are proper; all which things do temper an acid, and allswage the membranous Parts, and sensible Fibres. Opiates may also be joyned with Precipitants. Therefore this absorbent Powder will be excellent.

M m m 2

Take

of a viscid, acid, sharp or matter, that offends either in the stomach, corrosive or viscid, and hangs about the upper part of the Stomach, do com-
mon Vomits, while strength is good; but if the patient have lost it, we fly to Diacord, joyned with Opiates, as a last refuge, which do the business in Fevers and Inflammations, and imbibe an acid. So the intention is answered by these
tinctura bezoartica, *mixture*, *Spiritus theriacalis*, *spiritus Hartshorn*, these fixt Medicines, *antidiaphoreticum*, *aurum ful-*
bezoarticum minerale, and *philosophically* prepa-
In this case also *essentia car-*
castorei, will be of great use. All Cinnabarines mixt
precipitants are proper here.
following Powder will be very

pulvis bezoarticus one
prepared shells, Cinnabar
Antimony each one Scruple,
half a Scruple, *laudanum*
two Grains, Oyl of
Mint each one Drop.
them. Make a Powder.

divers Paregoricks may be
as bags of Paregorick, and
Herbs, Mint, Worm-
wild Thyme, Chamomil
and Tops of Dill. Also
Unguents may be made of
especially a Plaster
applied of Gum *tacamahaca*
caranna with balsam of

Take of *pulvis absorbens Wedelij* one Drachm, *bezoarticum Jo-viale*, Cinnabar of Antimony each one Scruple, prepared Castor half a Scruple, *laudanum opiatum* one Grain. Mix them. Make a Powder.

I think also Powder of Crabs Eyes, Pearl, *sperma ceti*, and a little Castor are admirable good, because they imbibe the vitious Acid, as do all Alkalines, but especially mixt with Opiates. Externally divers Topicks are good, which you may find in the *Colick*.

§. 29. Cure of a Swooning Fever.

IN Swooning Fevers the Galenists commend divers spirituuous and comfortable things, whose number is infinite. *Sylvius* to prevent Swooning commends the following mixture;

Take of Water of Mint two Ounces, *Aqua vitae Matthioli* one Ounce, or Tincture of Cinnamon half an Ounce, Oyl of Cloves six Drops, Syrup of Scurvy Grafs one Ounce. Mix them.

We in these Swooning Fevers, the Palpitation of the Heart and Fainting, do use the following mixture, and other moderate Cordials, such as Water of Borrage, *Scordium*, Citron, Treacle, mixt with Syrup of Citron, Baum, and of the stronger sort, Gascoin's Powder, Bezoar, *confectio de hyacintho*, Venice Treacle, &c.

Take of Water of Borrage, *Scordium*, Black-Cherries each Ounces, Cinnamon with Butter one Ounce, prepared Pearl Drachm, Sugar Candy whole sufficient. Mix them.

Or in these Fevers you may Martial Antiscorbuticks, and Absorbents: for instance;

Take of *species cordiales temper* one Drachm, *pulvis absorbens* Drachm and an half, Pearl Drachm, Oyl of Cinnamon Drops. Mix them. Make a Powder. The Dose is from a Scruple to a Scruple in a proper vehicle.

The following Mixture will be improper, to refresh and cool the Spirits;

Take of Water of Borrage, Black-Cherries, Cinnamon one Ounce, Juice of *Kermes* Drachms, Musk (for such a bear it) one Grain, Cinnamon Native, or of Antimony of ty Grains, Civet, *laudanum opiatum* each one Grain, Syrup of Coral one Ounce. Mix them. Give it by spoonfuls.

So externally divers Cataplasms and Balsams may be applied to the Heart and Nostrils.

Cure of Asthmatick Fevers.

What Medicines the Galenists use in Asthmatick, and winded Agues, may be seen in the Chapter of the Asthma. For we commend divers Phlegmaticks and Incisers. We in these we recommend divers Pectoral, Sulphurated, and Myrrh Medicines, mixt with Aperient, and Salts, which have a Nitrous, and Diuretic Salt in them, and Diuretic this following will do the

of *Magisterium Saturni*, each one Drachm, of *Antimony*, Flowers of *Sulphur* each one Scruple, of *Benzoin*, half a Scruple, of *laudanum opiatum* two Drops, Oyl of *Aniseeds*, two Drops. Mix them. Make a Powder.

For Vomits will be proper, where any viscid Phlegm is in the Stomach; of which we have spoken before.

Cure of a Coughing Fever.

Coughing Fevers, *Sylvius* recommends divers Opiates, mixt with Volatil and Oily Salts. For this purpose he extols the following;

Water of Mint three Ounces, *Spiritus carminativus Syl-* one Ounce, *Ammoniack*

twenty Drops, *laudanum opiatum* three Grains, Syrup of Fenil one Ounce and an half.

In Imitation whereof, I use this following;

Take of Water of Mint two Ounces, Citron rind one Ounce, Spirit of Sal Ammoniack twenty Drops, Salt of Wormwood half a Scruple, Oyl of Mint two Drops, Syrup of Mint six Drachms. Take a spoonful at a time, and as there shall be occasion; add a Grain of *laudanum opiatum*, or *theriaca caelestis*.

In a moist Cough this following will be convenient;

Take of *Sulphur myrrhatum* two Scruples, root of *Florentine Iris*, *antimonium diaphoreticum*, each one Scruple, Crabs Eyes, Cinnabar of Antimony each half a Scruple, *theriaca caelestis* six Grains. Mix them. Make a Powder. The Dose from half a Scruple to a whole one.

§. 32. Cure of an Arthritick Fever.

IN Arthritick Fevers this following will be proper;

Take of *Arcanum duplicatum Mynsichti*, *antimonium diaphoreticum*, Cinnabar of Antimony each half a Scruple, *laudanum opiatum* two Grains. Mix them, for two Doses. Or,

Take of *Bezoarticum Minerale* fifteen Grains, Native Cinnabar
M m m 3 lix

six Grains, *laudanum opiatum* one Grain. Mix them.

And a Decoction may be made of Worms in Wine or Whey. And here all Opiates, and all Balsamicks will be proper, especially such as are taken from Wine. Several things may be applyed externally, which you may see in the *Chapter of the Gout*.

§. 33. Cure of a Mad Fever.

Sylvius Cures Mad Fevers by such things as correct and temper the Acrimony of the Bile; such as are Oily things especially, Emulsions and Opiates used inwardly, or applyed any way to the Head outwardly. In these Mad Fevers Vomits are given with good Success, while the strength is good. I highly value all Martial Aperients, Volatil, Cephalick Salts, Cinnabarines mixt with *arcantum duplicatum*, Camphore, Sugar, and Magistery of Saturn, adding (if there be occasion) some *laudanum opiatum*, or *theriaca celestis*.

§. 34. Cure of a Vomiting Fever.

IN Vomiting Fevers Sylvius advises all things which fix Bile, such as are Austere things and Opiates. ~~For~~ use to give *tinctura bezoartica* mixt with *essentia Anodyna*, or *essentia theriacalis* may be given with half as much of Essence of Opium, about forty Drops at a time. Also all Cinnabarines are good, mixt with Cream of Tartar,

Crabs Eyes, *terra Catechu*, of Aron, a few Drops of Oyl of Cinnamon, Mint, Mace, &c. In this case all things made of Treacle used either inwardly or outwardly will be proper. I have often with very good success given a Draught of new Treacle. The following mixture is excellent;

Take of Water of Mint, Raspberries each one ounce and an half, Cinnamon one Ounce, *Spiritus theriacalis camphoratus* Drachms, *laudanum opiatum* two Grains, essence of Ammoniac half a Scruple, Syrup of Marshmallows Drachms. Mix them.

Outwardly bags of Paregoric Herbs may be applyed to the Stomach: for instance;

Take of the leaves of Mint two handfuls, Nutmeg half an Ounce, Cinnamon, Mace each Drachm, quilt it with Cotton a round piece of Silk; besprinkle it plentifully with *Spiritus theriacalis*, or with Oyl of Nutmeg and Juniper.

Or the following Plaster;

Take of new Treacle half an Ounce, balsam of Peru half a Drachm Or,

Take of sowre Leven five Ounces, Powder of Mint one Ounce, doory six Drachms, three Nutmegs, Mace, Cinnamon each Drachm and an half, rose Vainegar what is sufficient. Make a Plaster.

Cure of Fevers with Loofness.

Fevers with a Loofness *Sylbius* commends the following Ele-

of Conserve of red Roses
Ounces, *diascordium* two
drachms, *confectio de hyacintho*
Drachm, *terra sigillata* one
Spoonful, Sugar half a Scruple.
and give about the quantity
Haze Nut often in a Day.

also commends Drink with
Steel or Gold quenched in
recommend Treacle, Car-
minative, Bezoardick, and
Medicines. Here also *essen-*
tialis, mixt with essence
will be proper. And
we prefer Powders and
Liquors, made of the foresaid
before Liquids; and since
Receipts of them every
it would not be worth while
repeat them.

Cure of Sweating Fevers.

Sweating Fevers, that are hard
Cure, *Sylbius* commends all
things; especially this mix-
ture following;

of Water. of Plantain three
drachms, Cinnamon, distilled Vine-
gar each half an Ounce, Syrup
of Plantain one Ounce, red Co-
chine Powdered one Scruple. Mix

This mixture, according to *Syl-*
bius his Mind, may be given by
Spoonfuls: If any one would have
it stronger, he may add half a Scruple,
or a Scruple of *Acacia*. *Wallis*
commends divers things; for in-
stance, tincture of Salt of Tartar,
about twenty or thirty Drops twice
a Day, tincture of Coral, Spirit of
Hartshorn, Urine or Soot. He
commends all Chalybeates, and the
following Powder;

Take of Powder of Ivory, Coral
each two Drachms, *Crocus Mar-*
tis, *Sal Chalybis* each one Drachm
and an half. Make a Powder. The
Dose is half a Drachm twice a
Day.

Use in all Sweating Fevers pre-
fer Saturnines; hence the Antiph-
thetical tincture is of great use in
these Sweating Fevers. Nor do
we exclude divers austere things,
which by closing the Pores of the
Skin, do the business.

§. 37. Cure of Pissing Fevers.

Pissing Fevers are cured almost
in the same manner, except
that Opiates are more proper in
these than Sweating Fevers: for
Opium in regard of its volatil, sharp
Salt is Sudorifick, and in regard of
its Sulphur Narcotick. Therefore
the Flood of Urine in Diabetick
Persons is best stoppt by Opiates.

§. 38. Cure of Spitting Fevers.

Spiritus cures Spitting Fevers by Hydragogues, Diureticks, and Sudorificks, taken in time, that is, before the fit, for the vitious Pancreatick Juice is carried off by these. We here commend all Aperients, especially Spirit of Sal Ammoniack. So relief may be expected from Opiates, especially from *Diacodium*, Treacle simple and *caelestis*, and several others. Here also all Decoctions of opening Woods, and *Thea* will be excellent. This following, according to *Ettmuller's* Judgment, will be proper.

Take of Shavings of Juniper two Ounces, Sassafras one Ounce and an half, Bark of *Guajacum* one Ounce, Leaves of Rosemary three Pügils, Juniper Berries one Ounce and an half. Infuse them in about a Quart, or five Pints of Water and Wine, let them stand four and twenty hours in *Balneo Mariae* in an Alembick, Boyl and destill it to half. Add to the Colature, of Spirit of Sal Ammoniack three Drachms, Syrup of Marigolds three Ounces. Make an Apozem for several times taking.

Astringent Gargles may be used.

§. 39. Cure of an Odontalgick Fever.

Besides general things, proper for a Fever, in these Odontalgick Fevers, according to *Syringius* his Judgment, the following mixture will be proper, taking a spoonful often before the Fit;

Take of Water of Betony, Fe each two Ounces, *aqua theophrasti simplex* one Ounce and half, *laudanum opiatum* the Grains, Oyl of Cloves four Drops, *Syrupus Stechades* one Ounce. Mix them.

He often applied Treacle Plaster-wise, to the part affected with good Success. In these Fevers in my Opinion *Opium* would be good, which taken inwardly cures Sleep and eases Pain, and applyed outwardly to the grieved Part, it stupefies the sense; and will mitigate divers Symptoms. The root of Smallage, and Benzoe chewed, cure the Tooth-ach. Moutear, Sage, and *Guajacum* Wood boyled in small Beer, and held to the Mouth, cure the Tooth-ach. Thyme also is proper external. Various Astringents and Anodynes may also be applyed to the Temples. This following is a sure Medicine;

Take of Mastich three Drachms, *laudanum* two Drachms, Bala Armenick, Dragon's Blood each one Drachm, Opium of Thebes one Scruple. With a sufficient quantity of Turpentine, make a Plaster for the Temples.

It also may be thrust into the

Put it with Coton into the
Tooth.

Spirit of Wine one Drachm,
Sulphure ten Grains. Mix them.

The rest you may find in some
other Chapter.

BOOK

Wind.

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B O O K V.

Of Women's Diseases.

C H A P. I.

Wind, Dropsie, and falling down of the Womb.

§. I.

Various are the Diseases, and as various and dire are the Fits, whereunto GOD and Nature have Ages, and at all times, sub- the Female Sex, be they Wives or Widows. The of their going with Child is a serious Event; but their Child- ing turns the Odds into the evous Scale. Nay, *Riverius* runs up above six hundred Dis- of the Womb. And certainly Womb is the occasion of infinite ices and inconceivable Trouble Women. Consider, I pray you, the Pains that attend the tender and Bodies of Woman kind, which invert, if not totally evert the Structure, and how, while they chew one mischief, they in- a greater. In the time of their pregnancy the Poor Wretches can you, how the Wain, Full, and

Change of the Moon afflict them. And when Married, what Trouble are they not Liable to? When they are Breeding, they sometimes long for strange things, and sometimes loath whatever is set before them; sometimes their Stomach is spasmodically affected, and then they are forced to Vomit either all Day, or at some certain hours. Towards the latter end of their time, when the Child's Motion is pretty strong, they are sensible of Cruel Pains; and if the Child seek to enlarge it self, and make its *exit*, how violent is their Pain? But when the Child is near the Birth, what Torture does the Mother not suffer? The Scriptures make it so exquisite, that no Pain can surpass this. And when this is over, and the Childbed-purgations come, upon what a Rack do they put Women? Certainly *Helmont's* saying is no less learned than true, *That a Woman undergoes every Disease twice.*

A Woman's

A Woman's condition is miſerable, compared with Man's; be-
 cauſe ſhe is not only Obnoxious to
 thoſe many Calamities, which the
 make of her Body, being the ſame
 with that of Man's, ſubjects her to;
 but ſhe muſt contend with her pec-
 uſiar Miſfortunes and Miſeries, in
 regard of her Womb, which is
 ζῶον ἐν ζῶῳ, an *Animal in an Ani-
 mal*. But I have long queſtioned,
 whether all theſe things are Me-
 chanically performed in the Womb
 it ſelf, and whether all theſe Ails can
 be raiſed by the ſole Ferment of the
 Womb. However I ſhall treat of
 this in its proper place.

Fiſt of all there preſent them-
 ſelves, Wind, Dropſie, and falling
 down of the Womb.

The Wind and Dropſie of the
 Womb oftentimes deceive the Phy-
 ſician; yea, and Patients themſelves,
 they Dreaming of nothing but be-
 ing with Child. Therefore the Phy-
 ſician muſt needs be careful in his
 diſtinction, that he miſtake not
 Wind, or the Dropſie in the Belly,
 for Wind in the Womb; or Wind
 in the Womb for Wind in the Belly;
 but much more let him be care-
 full, that he miſtake it not for being
 with Child.

§. 2. Difference.

SWelling or Wind in the Womb
 (which is produced only by
 Wind preternaturally detained in
 the Womb) differs from being
 with Child, becauſe in a Swelling
 a Decrease and Increase may be ob-
 ſerved; in being with Child the
 Belly always Increases by degrees;
 beſides there is uſually Milk in the
 Breasts: And it differs from Wind
 in the Belly; becauſe, when it is in

the Belly, a rumbling may be
 ceived all the Belly over.

§. 3. Description of the Dropſie in the Womb.

THE Dropſie of the Womb
 is a watry gathering, ſometimes
 in the ſubſtance of the Womb, ſome-
 times between its Membranes, ſome-
 times in its Cavity; and ſometimes
 the Teſticles, out of which I
 often ſeen three quarts of Lin-
 Water taken.

§. 4. Description of Falling down of the Womb.

THE Falling down of the Womb
 is falſely ſo called; ſince
 rather the extension of the inner
 rugous *vagina* beyond its Seat
 Place, within which according
 nature it ſhould be contained,
 for the following Argument I
 vince, that the Womb it ſelf
 not fall down; becauſe the Strength
 of the Ligaments, by which
 Womb is faſtened to the adjacent
 parts, cannot be ſeparated by
 greateſt Violence; and the ſtrength
 of them, being not a Span long,
 will not ſuffer the Womb to
 out at its inner Neck: Therefore
 the Falling down of the Womb
 which is vulgarly ſo called, is
 the falling down of the *Vagina*:
 if the Womb it ſelf fall down,
 could not ſo eaſily be replaced,
 we find it is. Yea, I diſſected
 a Woman, who had a Falling down
 of the Womb, and though it ſeemed
 ed, as if the whole Womb had
 fallen down, yet it was faſt to
 Ligaments. And the Famous Me-
 Melan

a Surgeon at *Amster-*
observed it, as well as I.

§. 5. Signs.

For the Diagnostick of a
Dropfie or Inflation, it is
difficult and obscure, because
the Womb is afflicted with
cold humours, it usually suffers
the Symptoms and Signs; yea,
the Disease is very difficult to be
distinguished from Impregnation.
You may easily attain the Dia-
gnostick, if you observe the Prece-
dents, and the particular Sym-
ptoms of this Disease, and the adju-
vants and *sedentia*. The usual
Symptoms are a Swelling gradual-
creasing, and continuing too
long time without any sense of
Pain or Life, to be a Conception,
and altho' about these Parts,
sometimes a Fluctuation, with
a Sense of Cold or Pain; there is a
Swelling of the upper parts, fits of
Fever, and a suppression of
the *Menses*: but there is some Se-
cretion of Puitous Excretion, when an
Humour is gathered in the Cavity of
the Womb; and if there be Wind,
you may know it by the puffing up
and swelling in it. The Famous
Galen has a History of a Wo-
man at *Strasbourg*, that had a
Swelling of the Belly for above ten years,
and both a Dropfie, and a *Mola*
in her Womb.

§. 6.

THE Signs of the Falling down
of the Womb, are evident of
themselves, and told by the Patient.
The Signs also of the Causes are ea-
sily known, if a Physician look but
at him, as he ought; for an

Afflux of Blood may be known by
the Signs of a *Plethora*, and the
stoppage or excess of the *Menstrua*;
and so may a Serous or Puitous
Humor.

§. 7. Causes of Inflation
and Dropfie in the
Womb.

THESE Diseases have the same
causes in a manner, as the
Tympany and *Afcetes* have, which
you may see in the Third Book. For
here is a particular extravasation of
the *Lympha*, and a Concentration of
Wind. We doubt not therefore, but
there is an acid Phlegm lodged in
the Womb, and rareied into Wind,
so that it cannot do its Office. But
if instead of Wind there be a Viscid
and thick *Lympha*, and if there were
formerly an Obstruction or Com-
pression of the Lymphatick Vessels,
the *Lympha* must needs stagnate
and breed a Dropfie.

The Procatartick Causes are Re-
frigeration of the Genital Parts after
Childbed or the *Menses*, or Cold
taken in the Hands or Feet, before
the time of the *Menses*, or dabling in
cold Water, or the abuse of Cooling
and Repellent Medicines in infla-
tion of the Womb. Also acid, wa-
try, gross and viscous Seed often
causes these Distempers. Hither also
may be reckoned too much small
Drink, much Sleeping, an idle and
sedentary Life, (such as a Woman's
generally is) Trouble of Mind,
Sorrow, Care, and such things as
that Sex lay to heart; Excretions
also, both Universal, and Particular
of the Womb suppressed, and
miscchances by a blow, fall, inflam-
mation,

mation, Contusion, Scirrhus, Ulcers, and such like cases.

Secundine violently, a Mole, a Child, &c.

§. 8. Causes of the Falling down of the Womb.

THE Causes of the Falling down of the Womb are either Internal or External; the Internal are the Relaxation and Emolliation of the rugous Coat in the *vagina uteri* by an Afflux of Blood, Serum, or some other humors. So likewise the internal Parts may be corroded by the Acrimony of the Humors, that flow thither, and so a Procidence may be caused. These Parts also may be torn or dilated by a fall, an Ulcer, difficult Travail, or an unskilful Midwife.

The External Causes are several, an over Cold and Moist Air, Bathing, Oyntments, Cataplasms, and Emollient and Cooling things, too much Drinking of Water, Slippery Diet, Diureticks and Menagogues given in over great Quantity, excessive and unseasonable Sleep, especially in moist and cold places, too violent exercise of the Body, either Walking, Travelling a Foot, Dancing, Riding, Coughing, Sneezing, or Vomiting, &c. Sudden Passions of the Mind contribute their Share, especially Anger, Grief, Care, &c. Excretions either suppressed or immoderate, as the suppression of the *Menstrua*, their excessive Flux, the Flux of the *Lochia*, or the Whites, Costiveness, Looseness, Dysentery, *tenesmus*, excessive Venery. And so this Disease may easily be produced by a Blow, a Fall, Contusion, Ulcer, by the Midwife's drawing away of the Child or the

§. 9. Prognostick

NOW we have done with the Causes, we will proceed to the Prognostick. The Intention and Dropsie of the Womb is difficult to cure, as all Dropsies are; and by reason of the grievous Symptoms often mortal, such as Inflammations, Ulcers, Scirrhi and Cancers, which follow poor Women to their Graves.

The Falling down of the Womb is of it self no dangerous Disease, but by accident it may prove dangerous, especially if an Inflammation, Ulcer, Gangrene or Mortification supervene; or if the Suppression of the *Menfes*, Fits of the Stomach, Pain, Fever or Convulsion follow, &c. This Disease, because it is usually of long continuance, is called Chronical, and is difficult to be cured, especially if the Procidence be great and inveterate, produced by a violent cause in the Body, that is Cachectick or weakened by other Diseases.

§. 10. Cure of Wind and Dropsie of the Womb.

THIS thing being premised to Theory, we will proceed to Practice. Wind and Dropsie of the Womb require a Diet, that is heating, drying, aperient and evacuating or discutient. When this is done, Humors, especially the gross, must be corrected and evacuated; and if there be Wind, it must be discussed.

We may proceed therefore firſt
inciding, attenuating, open-
ing and diſcutient Medicines; to
Decoctions of the opening
of Wood of *Guajacum*, *Sassa-*
China, *Sarſaparilla*, which
Sudorificks, and ſo expel the
Theſe things alſo are good;
Sassa-wood, leſſer Centaury, Sol-
middle rind of Elder, Bay-
Juniper-Berries, Nettle-Seed,
uterine things, Roſemary,
Penny-Royal, Mugwort,
Therefore this following Spi-
and Aromatick Liquor will
per, to keep all quiet;

Water of Roſemary, Penny-
Mugwort each one Ounce
half, *aqua hystERICA* one
prepared Crabs Eyes, *tar-*
virriolatum each half a
Oyl of Salt eight Drops,
of Elder half an Ounce, Sy-
of the five opening roots one
Mix them.

alſo are proper all Carmina-
Oily Salts, things that
the *Menſes* moderately,
Myrrh, Caſtor, and all
and Cordial Medicines. Theſe
premised, all Hydragogues
per: for inſtance;

of *extractum hydragogum*
a Scruple, Magiſtery of Gum
five Grains, *Luna Hydra-*
two Grains. With eſſence
Mugwort make Pills, to be
according to the ſtrength
age of the Patient.

of Buck-thorn often re-
excellent in this caſe. And
Medicines made of Jalap,
its tincture. Berries of

Elder, Dwarf-Elder, Juniper and
Bayes are good, eſpecially in Wind
of the Womb;

Take of Rob of Elder two Drachms,
extractum carminativum one
Scruple, Refin of Jalap ſix Grains,
Oyl of Aniſeeds one Grain. Mix
them. Make a *Bolus*.

Juice of Briony root collected
and given our way, affords great re-
lief. When things are thus prepa-
red, we muſt endeavour to diſcuſs
the Humor by Sudorificks and Diu-
reticks;

Take of Spirit of Tartar, *Sassafras*
each one Scruple, nitre dulcified
fifteen Grains, *antimonium dia-*
phoreticum one Scruple, Water of
Penny-Royal, *carduus benedictus*
each one Ounce and an half. Mix
them for a Doſe.

Such Diureticks are alſo good,
as we have recommended in the
Dropſie; and ſuch Plasters and diſ-
cutient Cataplaſms, as we have there
preſcribed, adding alway Volatil or
fixt Salts, or ſuch things as abound
with them, Lungs of Animals and
Oily and Aromatick things. Peſſaries,
Baths and Fumes may be here ſuc-
ceſs fully uſed. *Pharamundus Rume-*
lius his inſtrument is good to get
Water out of the Womb.

§. II. Cure of Wind in the Womb.

ALL things that abſorb an Acid,
and conſiſt of aromatick
oily Parts are good to diſcuſs Wind.
The following mixture was given
with good Succeſs;

Take

Take of *Aqua Carminativa* four Ounces, Orange Water drawn with Sack one Ounce and an half, *Spiritus ſalis Ammoniaci anifatus* one Drachm, *Spiritus nitri dulcis* one Scruple, Crab's Eyes prepared one Drachm, Syrup of Orange Pill fix Drachms. Mix, and give it by ſpoonfuls.

Root of *Doronicum* is commended as a Specifick in this Diſeaſe. Divers Carminative Externals may be uſed, Fomentations, Cataplaſms, &c. You may ſee the Medicines for a Tympany. Sometimes they may be mixt with Hyſterick Specificks. A Bag may be made of Millet with Uterine and Carminative Herbs; and internally Carminatives may be mixt with Purgers. Glauber has an excellent way of getting the Impurities and Wind out of the Womb, by a peculiar inſtrument: He puts in Salt of Tartar, and Sal Ammoniack, or the fume of them, that it may the better reach the Womb. Since there is ſeldom an inflation of the Womb, without extravafated Serum, therefore Hydragogues muſt be mixt with Carminatives.

§. 12. Cure of Falling down of the Womb.

THE Cure of the Falling down of the *vagina uteri* is two fold; True and Palliative; and both of them have three Indications: 1. To remove all things that impede the replacing of the *vagina uteri*; ſuch as Inflammation, Tumor, Gangrene, Ulcer, Excoriation, Coſtivenesſ, Stoppage of Urine, the *Menſes* either ſuppreſſed or too fluid. If then there be Wind or Excrements

in the Gutts, the Clyſter follow-
may be given.

Take of the Ingredients for Carminative and Emollient decoctions each one handfull, Bays half an handfull, Seeds of Cumin, Caraway two Drachms. Boyl them in ſufficient quantity of Corn Water. In eight Ounces of Colature, diſſolve of *Electuarium lenitivum, de baccis lauri* three Drachms, one Yolk of Egg. Make a Clyſter.

2. Then let the part, that is down and extended, be put again into its place, but firſt be waſhed with ſome abſorbent or gently aſtringent Decoction let it be anoynted; yet there muſt be no Inflammation, Eryſipelas nor Gangrene. And ſuch a Fomentation may be uſed;

Take of leaves of Oak, Meliſſa, Plantain each one handfull, of Tormentil, Biſtort each one Ounce, Alum half an Ounce. Shred them, put them in a bag, boyl them in Wine, and uſe them as they ought, to the ſame end.

A Powder may alſo be ſtrung upon it, made of Conſolidant Aſtringents, ſuch as Frankincenſe, Myrrh, Maſtich, *Sarcocolla*, Roſes, and Juice of *Hypocistis*. But above all things we muſt take care, when it is replaced, to put it in its place, and knit it to the adjoining parts. To which end the following Decoction will be ſerviceable;

Rupture wort one handful
half. Flowers of red Roses,
of Mugwort, Motherwort,
half an handful, Root of
Bistort each one Ounce,
them in red Wine or Smith's
water, and foment or wash the
womb with it.

use this or some such like

of *Unguentum Comitissæ*
Drachms, *Crocus Martis*
two Drachms, Pow-
der of Mastic half a Drachm,
of Myrtles, what is sufficient
in Liniment.

strew on some of the fore-
powder, and set your self to
action of it, which you may
do, by placing the Woman on
her side, or in a Bed, so that her
womb be below, and put it gently
in its former place, either with
her hand alone, or with warm
oil. Let the Patient draw in
her breath. And when the part is
returned to its former place, care must
be taken to fasten it inwardly, for
which divers Plasters may be
applied to the Pubes, and to the
womb itself; for instance;

of *Emplastr. matricar. Rumel.*
much as shall be sufficient to
cover the part with a little Bear's Grease.
spread it on Leather. Or,

Take of our usual Plaster *contra*
rupturam what is sufficient, *Cro-*
cus Martis astringens three
Drachms. Mix them with some
Bear's Grease.

Palliatively also the protuberance
of it may be hindred with Balls or
Rings (which I prefer before Balls:)
Wax, Rosin, or Gumm, is good.

In the true Cure internal Vulne-
raries and light Astringents must not
be neglected;

Take of rasped *Guajacum* five Oun-
ces, *Sassafras*, *guajacum* Bark
each one Ounce, leaves of Ladies
Mantle, Winter Green, Speed-
well each half an handful, seeds
of Plantain two Drachms, boyl
them in a sufficient quantity of
Common Water. To thirty
Ounces of the Colature add of
Syrupus de Symphyto Ferneli
three Ounces. Mix them.

Then the Symptoms, as there
shall be occasion, must be abated.

Pessaries also made of Astringents
are good: But before these and all
other things some prefer fumes of a
Salt Eel's skin, Hypocystis, dried
Cow's Dung, Alum, Musk, *Aca-*
cia. A Clew of Hempen Yarn may
be applied with Wax; and ashes
of Beetles may be often strewed
on the Part, or the patient may
sit upon cold Oaken Wood.

C H A P. II.

Of the Hysterick Passion, or fits of the Mother.

§. I.

THE *Hysterick Passion*, is in Latin, from the most Urgent Symptom, called *Suffocatio Hysterica*, in English we call it, *Fits of the Mother*, because it is vulgarly held to arise from the Mother or Womb, but how truly, I shall not now examine, since that is decided by others already. It is a Concurrency of divers Symptoms, arising generally from an austere humor, and a Disorder of the Spirits in the Womb. *Helmont* calls it *Asthma uterinum*. In Men some call it, *suffocatio hypochondriaca*, as in Women it is called *suffocatio uterina*. *Sylvius* calls it *suffocatio* and *strangulatio hypochondriaca*, both in Men and Women. It is certainly a most grievous Disease, and comprehends various Symptoms under it; and therefore it frightens not only the poor Patients, but the very Physicians and By-standers: For Women sink down on a sudden, their Body is Chill, their Breath and Speech is gone, their Pulse ceases, and sometimes Sense and Motion is abolished, so that they ly in a manner for Dead. But more of these things in the Diagnostick.

Difference.

THis Hysterick Passion is Analogous to an *Incubus* in Men, and in some things agrees with an Apoplexy. But it is distinguished from that, because in Hysterick Passion there are Convulsions and Pain; but in an Apoplexy there are none of these Symptoms. And in an Epilepsy there are far more grievous Convulsions than in the Fits of the Mother. And thus this disease may easily be distinguished from other Cognitive Diseases. But we need be the less solicitous about distinguishing of the Diseases, because the Cure in all of them is the same.

§. 2. Part affected.

VWith the old *Galenists* the place affected is the Womb, which they, as well as Vulgar, thought arose up to Throat. But this opinion, that formerly held by the Vulgar (which I admire at) by most Physicians, is now quite confuted by the Moderns; so that there is no need to say any more against it. *Sylvius* takes the *Pancreas*, Guts, Stomach and Gullet

affected, which in this Disease to be contracted. *Wilmont* in Fits of the Mother, the Patients complain, when they are able of a Tension of the Intermuscles, and they think, they are girt with something about the Neck, or that a Stick is thrust below into their throat. And some say, that the Stomach is the Keys of the Womb. Some reckon it is the Brain; because the Nervous kind is affected. Some not only the Womb and Vessels and Glands; but the first ways, where the Cause often lies, which uses to be communicated to the Heart, and hence comes a multitude of Evils. But before we proceed further let us inquire into the principal Symptoms; that from a known premise, we may find the cause of this Disease assigned.

3. *Diagnostick.*

Scarcity of Breathing accompanies this Disease, there is a Stricture in the Throat, and a kind of Stick thrust into the Throat, there is a Stricture in the Guts, sometimes a Scurfiness, seldom Vomiting, Palpitation of the Heart, and Heart-burn are often its Signs. In the Fit the Pulse is sometimes quite abolished for half, or a whole hour, and then for a Day or two, so that such have been taken for dead, who have signs from whence we may see there was Life, appearing in an abundance of creditable instances. *Good Authors* testify. The

Throat is so straitened that the Patients seem to be strangled, then a notable Paleness and Chiliness follow, Motion and Sense are sometimes wholly, sometimes only in Part, taken away. Oftentimes a round thing may be felt in the *Abdomen*, to pass up to the Diaphragm, which they say is the Womb; but they are mistaken; because the Womb is fast tied by its four Ligaments. There are also Swoonings, various Convulsive Motions and Epilepsies, the *Menses* are often suppressed. A Pulsation may be felt in each *Hypochondrium*, especially in the Left. The Patients complain of restlessness, Thirst, divers Pains in the Head, especially Stomach, Limbs, &c. Sometimes they are Costive, and yet Lenitives make them worse, as I observed in a Woman, who upon taking an emollient Clyster with half an Ounce of *Electuarium diacatholicon* in it, went to Stool twenty times, Swooned, and her extreme Parts were Cold. At length, unless the Patients die, after the Fit is over, Motion and Pulse is restored to the Heart and Arteries, the Breast extends, and respiration is renewed, their Speech comes to them, and they complain of Oppression at the Heart. Some cannot bear Perfumes, to wit, Amber, Musk, Cinnamon, Roses, &c. The Scent whereof several Men cannot endure; we have an instance of it in *Lewis* the Fourteenth, the present *French King*. And these are the most grievous Symptoms of this Disease: but it were impossible to name all.

§. 4. Cause.

NOW we will proceed to the Causes of this Disease, which, in the Opinion of the *Galensists*, are Malignant and Poysonous Vapors proceeding from Blood and Seed corrupted in the Womb, and from other humours gathered there, acquiring a Malignant and Poysonous Nature, which are elevated by the Veins and Nervous Kind to the upper Parts, and as they are carried to this or that, produce divers Symptoms.

§. 5.

SPLIVS seems in a manner to agree to this Doctrine; but he expresses the thing otherwise, and says, that a Contention is raised between the Pancreatick Juice, carried into the *intestinum tenue*, and Bile there, consisting of a lixivial Salt, Oyl and Volatil Spirit; the Author terms it an Effervescence. From which vitious Effervescence, he questions not, but austere Vapors arise to this or the other part, and from thence all those Symptoms, which we meet with in Hystericks, arise.

§. 6.

HELMONT thinks, that this Disease comes not from a Corporal confluence of Humors and Vapors in the Ventracles of the Brain, but that it is a Disease by Deuteropathy, and that the Womb, which would otherwise be quiet, is put into a rage by Anger and Grief. Indeed the Womb, as he says, never gets higher than the Diaphragm;

However it makes People plectick.

§. 7.

VALLIS reckons this among Convulsive seases, and he derives the Cause thence.

§. 8.

WE think, that in the lower Parts of the *Abdomen*, but especially in the *Womb*, there are animal Spirits, which are contained in the Fibres of the *Womb*, if they be obsequious, the Motions are constantly regular. But if these Spirits be much provoked by something vitiously austere, that is apt to ferment, they become Tumultuous, and being thick crouded, and not able to get out, they distend, tear, dilate the Membranes among which they are interwoven, and puff them up, as if they were blown up with Wind, hereupon the Folds of the *Womb* and Mensentry being agitated by the Spirits, do swell, and leap within the *Abdomen*, likewise the Coats of the *Stomach* and *Guts* being in like manner puffed up, by the Expansion and Impetuosity of the Spirits, are violently distended and tormented with Wind: In this Convulsive while the *Guts* and *Abdomen* are in Convulse, the Motion is sometimes continued to other Parts, but it comes that Globe in the *Abdomen*, and from the spasmodical contraction of the *Throat*, that Bullets in the *Throat*: hence come Epilepsies. In this most grievous Disease, the same Acid or Austere at last

supervenes a stagnation of the Blood, and from thence Suffocation of the heart.

Among the Procatartick Causes a cold Air, Sowre or Astringent Food, or bitter, and some-
times sharp, all perfumes held to the Nose, Musk, Cinnamon, Roses, Civet. Sleep and Watching beyond their bounds, are hurtful, and so is excessive or unseasonable exercise of the Body, and a sedentary Life; but. Sudden and violent Passions of the Mind, such as Care, Fright, Anger, Love, are most effectual Causes, and all Excretions, when there is either none, or intermitted, or too much.

When the Hysterick Fit has lasted some time, the Patients come to themselves, very much tired with their Passions, and their Limbs as if they had been beaten with a Staff, and indeed the Cause is in the same: for as by the beating of a Staff the Fibres are broken, whence comes Pain; so likewise by the Convulsions the Fibres are here and there, which occasions this Pain.

9. Prognostick.

WE will now briefly touch upon the Prognostick. This Disease is not very dangerous: for of it self it is seldom fatal, though in regard of continued Diseases, or supervening Symptoms it may now and then be mortal: But it lasts long and obstinate, especially if time be not settled it, or if it be attended with grievous Symptoms, principally in old Women. And Virgins are altogether as liable to this

Disease as sedentary Women, because their Blood is spirituous, and their nervous texture strong. It is a dangerous Disease for Women in Childbed, and with Child. Sometimes it degenerates into an Epilepsie, an instance whereof I knew in this City. That Aphorism also of Hippocrates 5. 35. has relation to this place, *Sneezing supervening to a Woman with Child, is good*; because by that violent Motion, the Humors, they being but small in quantity, that cause the obstruction, are expelled. So also it is good, if plentiful belchings supervene, which Sylvius has observed, for they often put an end both to the Fit and the Disease.

§. 10. Dietetick Cure.

OUT of the Fit look well to the Diet, and avoid all abuses in it. Let the Air be temperate, avoid a sharp, Northerly one, and the smell of a Candle Snuff, Musk, Civet, and other Sweets.

The Food must be of a good Juice. Forbear all things that are Austere, Acid, Salt, and Difficult of Concoction and Fermentation, such as Chestnuts, &c. All things likewise, that are Smoak-dried, are bad. The Drink must be well wrought Beer or small Wine. All Beer, that is not well Boyled and Fermented, is naught, and so is drinking of Water, new Wine, &c.

Motion and Rest, the excreta and retenta, especially the stoppage of the Menfes, a Costive Body, and Retention of Seed, if they exceed bounds, fail not to occasion this Disease.

Sleep and Watching must be kept within bounds; for excess in them does harm, because it breeds crudities.

The *Mind* must be kept cheerful; Sorrow, Fear, Consternation at unexpected events, and such Passions may easily cause this Disease.

§. II. Pharmaceutick Cure.

THE old *Galentists* have two curative intentions in Fits of the Mother, one in regard to the Fit when it is present, the other in regard to the time free from the Fit. They therefore endeavour, that the malignant Vapor rising from the Womb may be dissipated, and averted from the principal parts, then, that the Humor, whence the Vapor arises, may be evacuated, and cast out of the Body, and at length, that the Parts may be strengthened. If a Woman therefore be in a violent Fit, they commend loud Shouting, plucking the hair, and the ears especially, Ligatures and Frictions; but above all, according to our observation, tickling the soles of the Feet discusses the Fit. They are also for cupping the Calves of the Legs and the Thighs with much Flame. They hold strong scented and stinking things to the Nose; such as Castor, *asa fetida*, smoak of Partridge Feathers, of Hoofs and Horns, &c. that the Malignant Vapors may be discussed: for which end they burn the great Warts, that grow on Horses Legs, as a secret; and hold them to the Nose. They apply divers sweet things to the *Pudenda*, such as Civet, Musk, and *Gallia moschata*, that the Motion of the Humors and Spirits may tend downward, and be abated.

They make Revulsion also of matter, that flies upwards, Clysters made of Uterines and minatives. And to take away matter of the Vapors it self, they apply Pessaries (which they barbarously call *nascalia*) to many Women they put divers stertories into the Nose, they drop of Sage, Amber, Spike, &c. the Ears; they apply a Galban Plaster to the Navil. And if Fits proceed from stoppage of *Menfes*, they order bleeding, give several Uterines and Anodynes which you may find in several Editions.

Out of the Fit they endeavour if it come from corrupt Seed in Womb, to evacuate it by Uterine Clysters and Pessaries; they apply proper Plasters and Oyntments to the Region of the Womb, for which end *Sennertus* commends the following Unguent;

Take of liquid *Storax* two Drachms, Cloves, Seed of *Agnus Castus* each half a Drachm, *Angelica* each half a Drachm, *Alipta moschata* one Scruple, Oyl of Nard, white Lilies, Wax each what is sufficient. Make an Unguent. And the Plaster following;

Take of Seed of *agnus castus* one Drachm, all the Sanders each half a Drachm, Powder of white Roses one Drachm, Gum *camabaca* one Drachm and half, *caranna* two Drachms, *alipta moschata* half a Drachm, Turpentine, *ladanum*, Wax, is sufficient. Make a Plaster according to Art, and let it be applied.

the Fits came from the Re-
and Corruption of the Men-
things that provokethe Men-
which shall be hereafter men-
will be good, and bleeding,
was said before.

the only aim of all the Ga-
to discuss malignant Va-
and to strengthen the Womb,
which end they extol Bawm,
Penny-royal, Calamint, roots
Angelica, Masterwort, Spignell,
but especially Briony roots,
they distil divers Waters from
and other Aromatick things,
they make Powders of them,
a *Species galangæ*, *diacala-*
diacinnamomi, &c. They
highly value Treacle, Mithri-
quies *Nicolai*, and Castor,
which they make divers Re-
which all Galenical Books
of.

§. 12.

above all things com-
ends anointing the Navil
of Tin, which is thus made;
Tin in *Aqua fortis*, and re-
into Cerus, this must be
and dissolved into Crystals,
being distilled will yield a
Liquor and yellow Oyl; out
remainder a Salt may be got,
in a Cellar will dissolve into

§. 13.

Helmont says, although sweet
and grateful Scents indispose
Women; it does not there-
follow, that all strong and
things must cure them:
says, that burnt things and

the smell of burning Sulphur, do
not refresh Hysterick Women, as
they stink, but as they check and
destroy the external *Idea's* which
are impressed on the Womb. The
Author recommends all bitter
things to Hysterick Women. His
Hysterick *arcana* are *dulcedo Sul-*
phuris made of *vitriolum Veneris*,
tincture of Coral, essence of Amber
and Agate, white dead Nettle, stink-
ing Horehound, Rue, Southern-
wood, Sage, Nep, berries of Elder,
Dwarf Elder, *asa fetida*, the wart
of a Horses Leg, red Coral; he goes
on and says, all simples do not e-
qually cure bewitched Persons; so
neither do they Hysterick Persons;
for each of them has its singular en-
dowment of *Idea*, and takes away
its opposite Disease. Wormwood,
Sage and Rue drive away *Idea's* of
fear. Mugwort, Nettle, stinking
Horehound, and black Currans are
good in cases contracted from Grief.
Asa fetida, Castor, Elder Berries,
and essence of Agate are good in
cases of Anger. *St. Johnswort*, and
Phutertium in mad *Idea's*. A dried
Hare, the testicles of some Beasts
dried in the Smoak, a Stag's Pizzle,
agnus castus and Amber in Libidi-
nous *Idea's*. Also *electrum mine-*
rale, prepared Coral, and greater
Arcana are next to an universal
Medicine, near to which the Secun-
dine of a first born Male, the Gall
of a Snake, &c. do approach. And
these *Arcana*, *Helmont* says, seldom
fail a Man. On the contrary in Di-
seases of the Womb he contemns all
sweet things, because in his Opi-
nion they disturb the quiet of the
Womb.

§. 14.

Wills in this Case commends all the Anti-spasmodicks, which he advised in an Epilepsie.

§. 15.

Splutus, be the cause what it will, for Fits of the Mother commends all volatil Salts, and above all of them, Spirit of Sal Ammoniack, about 3 or 4 Drops or more, taken often in a spoonful of Wine, or some other proper Liquor. For discussing austere Wind and Vapors, beside this Spirit of Sal Ammoniack, he commends Spirit of Castor, its tincture, and Oyl of Amber, Mace, &c. distilled. But when the steems or wind are both glutinous and sharp, he highly values *spiritus nitri dulcis*, and Spirit of Orange Pill, Rosemary, &c. But where the Vapors are more Watry, beside the foresaid Volatil Salts, he advises the giving of Aromatick tinctures of Cinnamon, Saffron, Mace, not neglecting now and then to use Hydragogues, for to abate the redundant watry Humors in the Body. For discussing the austere Wind and Exhalations, that get up to the throat, he commends the above said Volatil Spirit of Sal Ammoniack or some Aromatick or Oleous Salt. Among Alteratives he commends all Aromaticks. Among Roots he commends root of *Asarum*, white Dittany, red *Iris*, tincture of Sowbred, lesser Centaury, *Aristolochia rotunda*, Gentian, Schœnanth, Spike, &c. Among leaves, Savine, Penny-royal, Mugwort, Rue, Bawm, Horehound, Calamint, Horse-

mint, Nep, Flowers of Chamomile, Saffron, Rosemary, Broom. Among Seeds, *nigella*, Parsly, Lupine, Smallage, Fenil, Lovage. Among Berries, Bay. Among Spices, Cinnamon, Mace, *cassia lignea*, Xylodoloe. Among Gums, Myrrour, Castor, *Galbanum*, *Sagapena*, Amber, Mastich, *Storax*, *Jacra*, *fatida*. Among Metals, Fil of Steel. But he especially commends his *Sal volatile oleosum*.

§. 16.

VVE do all we can, when we are curing this disease, that out of the Fit, the cause being removed, the Acid, Austere or Pontick Humor may be corrected, and in the Fit that the Spasmodick Concuision and Suffocation may be removed. All things that away the spasmodick Concuision which reduce the Animal Spirits, they are making their Excursion into order again: for which purpose we commend all volatil urine Salts, and other fetid and fusc sharp things, such as volatil Spirit of Sal Ammoniack, Soot, Horfes tincture of Castor, Amber, *assa fetida*, Paper, or Partridge Feathers burnt. The virtue of such fusc Scents or Stinks shows it self most by a sensible effect in the Persons; as the smell of generall Wine or any other Aromatick shows it does in such as are extreme Weak in a Swoon; so that sometimes seems to call them to Life again. Several Hysterick Women are cured by scented things, such as *assa fetida*, Storax, burning of Feathers, and fumes of Volatil things do good. Fumes are able to raise stupendous Symptoms.

symptoms, inasmuch as they affect
animal Spirits in the Womb:
his admirable, that Perfumes
in substance should effectually
Fits of the Mother. *Horatius*
genius has the following experi-
ment, as it is related *l. 12. Epist.*
you must observe here that
symptoms do notably vary;

of the best Musk five Grains,
Cinnamon, Cloves, Nutmeg each
one Scruple. Give it in a Glas
of some vehicle.

In the same place he commends
Pills as an effectual remedy;
have a care that the scent of
reach not the Nose. There
some Women also, that cannot
Castor and stinking things. And
you must also observe in your
office, that Women who are
struck from their Liver, abhor
stinking things. Wherefore a Physi-
cian must abstain from them.

Yet the effect is the certainest
in volatil fetid things. The
following Powder seldom failed

Take of *fecula bryoniæ* one Scruple,
prepared Pearl half a Scruple, red
Coral prepared, Castor each one
Scruple, warts of Horses legs pre-
pared half a Scruple, distilled Oyl
of Rue, Amber each five Drops.
Mix them. Divide it into three æ-
qual Parts, give them successively
in a convenient Vehicle.

It wonderfully appeases the
struck Spirit, and the Convulsive
contraction of the Throat and o-
ther parts presently ceases. A Grain
two of *laudanum opiatum* may

be added, And this that follows is
as good;

Take of *Pulvis absorbens Wedelii*
one Drachm, *bezoarticum Fovi-*
ale, Cinnabar of Antimony each
one Scruple, Castor half a Scruple,
laudanum opiatum one Grain.
Mix them.

For in the Hysterick Passion Jo-
vial, Saturnine, Anodyne, Castorine,
and Cinnabarine Medicines, perfectly
quiet these Convulsive Motions, im-
bibe the austere Humor, and per-
form the Cure. *Tinctura bezoar-*
tica, with Spirit of Sal Ammoniack,
and tincture of Castor, or *elixir*
uterinum mixt with *essentia ano-*
dyna, are generous remedies. I have
found the following Hysterick *lau-*
danum by my Practiceto be a noble
Medicine, which I am willing to
communicate for the benefit of the
Sick.

Take of extract of *Opium* made
with Vinegar one Drachm, Ze-
doary half a Drachm, warts of
Horses legs, root of *Calamus aro-*
maticus each half a scruple, native
Cinnabar, Castor each twelve
Grains, Saffron fifteen Grains;
Oriental Bezoar Stone half a
Scruple, Oyl of Amber, Rue
each what is sufficient. Make an
extract according to art. Three
or four Grains of it given in
Bawm or Calamint Water, do
Wonders. If you want these Wa-
ters, you may give it in table
Drink.

Johannes Agricola cries up the
following *laudanum opiatum*;

Take

Take of *laudanum opiatum*, extract of Liverwort each one Drachm, *oleum Saturni*, *Jovis* each half a Drachm. The Dose is two or three Grains.

Extract of Liverwort is made thus;

Take of Liverwort a sufficient quantity, pour some Bawm Water to it, put it into a Glas, for extracting the tincture, draw it off to the consistency of an extract.

When the Disease is very bad, there is a stagnation of the Blood, some way grown Grumous in the *Præcordia*, for the Patient can neither move her Breast, nor draw her Breath. For correcting the Acid, removing the *Coagulum* of the Blood, and for facilitating respiration, this following will be good;

Take of Crabs Eyes prepared, one Scruple, *antimonium diaphoreticum* half a Scruple, *Spermæceti* one Drachm, Castor one Scruple. Make a Powder. Give it in warm Broth.

All hot volatil Salts correct this Acid, such as *Elixir uterinum*, *febrifug*. *Mynsyck*. because by their bitterness they correct a vitious Acid. Spirit of Sal Ammoniac mixt with Oyl of Oranges, or of Rue, with Amber, does Wonders. And so does essence of Castor, or *asa fetida*, or Myrrh, or this following;

Take of Water of Swallows with Castor two Ounces, Bawm three Ounces, *Spiritus salis Ammoniaci Succinatus* half a Drachm, volatil Spirit of Man's skull one Scruple, Syrup of Bawm five Drachms. Mix them.

Liquor cornu cervi succinatus also tincture of Elder Berries, and all volatil things, as we said, are proper in as much as they recalc the exorbitant Spirits to the Womb for example;

Take of Water of Bawm three Ounces, zedoary six Drachms, *Spiritus salis ammoniaci rutaceus* one Scruple, Spirit of Harts-horn tincture of Castor each half a Scruple, Syrup of Mint five Drachms. Give it by spoonfuls.

Take of *aqua naphæ*, *carminativa* each two Ounces, *Spiritus cornu cervi tartarizatus*, tincture of Amber each half a Drachm, *asa fetida* twelve Grains, Syrup of Cinnamon five Drachms. Mix them.

Also *Spiritus urinosus salis Ammoniaci* given to half a Scruple, with essence of Castor is reckoned a most excellent Medicine in Fits of the Mother. Chalybeates also are of excellent use. And so the Spirit of Secundine is reckoned as a certain and specifick experiment in this Disease. The following balsam is an excellent Anti-hysterick;

Expose Soot to the cold Air, till you find a Viscous and liquid Balsam,

which you must keep

Mononates, especially essence
Monony, easily takes off the
of the Mother. Thomas Bar-
commends a Medicine
of a Stag's and Bull's Pizzle,
at a proper time, as a secret
of the Mother and the Co-

the time of their *Menses*
Women are often miserably
with Fits of the Mother.
commends this follow-

of *aqua hirundinum cum ca-*
one Ounce and an half, *Car-*
one Ounce, Crab's Eyes
one Scruple, *antimo-*
diaphoreticum half a Scruple,
sperma ceti one Drachm,
of Orange Pill half an
Ounce. Mix them well.

the Patient take two or three
of it now and then; for,
to my experience, the
not only thereby eased, but
Flux of the *Menses* promoted.
in this case one may bleed in the
Also this following ex-
of *Crolius* is highly to be va-

of extract of Castor, Saffron,
Mugwort each half an Ounce,
Salt of Mother of Pearl two
Drachms, Oyl of *Angelica*, Ani-
Amber each half a Drachm.
Mix them. The Dose is a Scruple
two at the beginning of a Fit;
for Prevention, once in the
beginning of every Month.

In the Fit sharp Clysters may be
given of Uterine and Carminative
things, in which about three
Drachms of Salt of Mugwort may
be put. But you must have a care
of such as are enclined to swoon
and are weak. Therefore the Pa-
tients must be asked, whether they
are able to bear Purges or Cly-
sters.

Here you must observe, that
all Antiepilepticks are proper in
this case, and that this Disease uses
to be cured as an Epilepsie; nor
must externals be neglected in the
Fit. And this you must observe
in general, that though the Sym-
ptoms seem to grow worse by
some Medicine; yet you must
not therefore judge, that the Me-
dicine was improper. Externally,
for raising of the Patient, stinking
things must be held to the Nose,
such as smoak of the warts of Horses
Legs, Feathers of Partridge and o-
ther Birds, Tabaco; blue linen
Cloth. But volatil Spirit of Sal-
Ammoniack surpasses all these, or
this stinking one, that follows, of
Amber;

Take of Amber, *asa fetida* each
three Ounces, Sal Ammoniack
one Pound, quick Lime, or
Oyl of Tartar two Pounds. Destil
them according to art, and keep
them for use.

Asa fetida, Castor, Rue, and
Caraway seed are Common, some
commend a fume of *Bitumen* as
a secret. Some Women can bear no-
thing but the smell of Vinegar or
Wine. Thomas Bartholine makes
a Girdle, which, he says, stops Fits
of

of the Mother. A Sponge may be wet in a mixture of *Spiritus cornu cervi* and *salis ammoniaci aromaticus*, and so held to the Nose, all which things wonderfully appease the Plastick Spirit. Several spirituous things may be put into the Mouth, especially *aqua vite*; the Nostrils may be anointed with rectified Oyl of Amber, or Spirit of Sal Ammoniack. Let the Temples be anoynted with Apoplectick Balsam, Rue, Amber, and other fragrant things. Sweet scented things, as Musk, Civet, Apoplectick Balsam, and such things must be applied to the Navil and the *Pudenda*: for they repel the Enemy, and comfort the Spirits. The Patient must rather sit than ly in the Fit, that the bowels may not press so on the Diaphragm. Blow Sneezing Powder into her Nose, or Tabaco Smoak, to raise her. Divers Liniments and Plasters may be applied to the Navil. This following is reckoned one of the best;

Take of Gum *Galbanum*, *tacamahaca* each equal parts, Balsam of Peru one Drachm, Oyl of Amber, Castor, each one Scruple. Make a Plaster according to art. Or,

Take of *asa fetida*, *Galbanum*, Ammoniack each two Drachms, Treacle one Drachm, Oyl of Amber, Castor each five Grains. Mix them. Make a Plaster. Or,

Take of Gum *Galbanum* dissolved in Vinegar half an Ounce, extract of Castor two Drachms, Oyl of Spike, Amber each one Drachm. Mix them. Make a Plaster according to art.

Some commend Yarn boyled and applied warm to the Womb Groin.

Thus much concerning the giving of Medicines, while the fit lasts but out of the Fit this Disease requires another Method. Out of the Fit such things are proper as fit to imbibe, precipitate and so way correct the pontick Acid. And we must have regard to the Womb therefore there will be need of those specifick Uterines, which were before recounted by *Sylvius*; wit, all aromattick and volatile things, and all Precipitants. When the austere, pontick, and ostentatious viscid Humor is corrected, it will be time to carry it off. For which purpose divers Purgatives are good mixt with Hystericks The following Physick Wine is of no contemptible use;

Take of leaves of Wormwood *Carduus benedictus*, Bawm Spleen-wort, Wall Rue each half a handful, root of Zedoary Eryngo, Burnet each half an Ounce, *Angelica* two Drachms, best Rhubarb three Drachms, leaves of *Senna* one Drachm, Seed of Sermountain, Fenil Caraway, each two Drachms and an half, rind of Tamarisk Ash, Orange each three Drachms, Crude Tartar half an Ounce. Shred them, and put them in bag.

If any one love Pills, here follow some;

Take of *species diacymini* two Scruples, *asa fetida* twelve Grains, extract of Castor half a Scruple.

Scruple, extract of Saffron five Grains, extract of Rhubarb, Tincture of jalap each half a Scruple, distilled Oyl of Amber, tincture of Castor each six Drops. Mix them. Make Pills for several Doses. But you must be cautious how you Purge.

After these things divers Alterers may be given, especially Oily Medicines, the *Sal volatile oleosum* or *Spiritus salis Ammoniaci*; and the use of them may be continued for some time. Warm Baths will be proper, so will all Jovial, Martial, Sassafras, Cinnabarine, and all manner of precipitating Medicines; Decoctions likewise of the Bark, and other Alkali Salts, Medicines of Myrrh, &c. are good. According to the Opinion of the Ancients, you have a Mind to breed Seed, then Abstinence, which is not otherwise proper in this Disease, will be necessary, and there may be given *Castus*, Camphore, Rue, *Centum refrigerans Galeni*, &c. you must have a care not to hurt the Womb.

These things following are Eminent; *Johannes Arcularius* says in l. 6. p. 17. 9. If any one on any other Day before Supper, take two Scruples of *Pilule tribemisia*, she will be kept from Fits; and she can find nothing more effectual.

Opheamagna half a Drachm, Chamomil one Scruple may be given fasting with Wine or Su-

vitrioli Veneris (a three Drops) is good against

all Hysterick Diseases. *Rhodericus a Castro* gives a Drachm of Venice-Treacle.

Johannes Crato has this singular Medicine. He dries Walnuts, and beats them to Powder, and gives two Scruples of it, with a few Drops of Oyl of Amber.

Johannes Faber commends Salt of Vitriol, because it vomits, and promotes the Menstrua.

According to *Claudius Deodate*, *Sal Jovis* put into or spread upon the Navil is an excellent remedy.

Petrus Forestus says, one who perceived her Fit coming presently prevented it by holding root of Masterwort in her Mouth, and chewing it a little, so several Authors extol Garlick shred, and applied to the Navil.

Heurnius gives a Scruple of Flowers of Nutmeg in Wine, and blew Bottle Water, wherein the quantity of a Hazzle Nut of Camphore was burnt.

Fridericus Hofmannus dissolved Hens dung in white Wine, mixt it with some Cordial, and gave it often with great Success.

So *Simon Pauli* magnifies the leaves of *Thea*, applied hot to the Region of the Womb and to the Navil.

Quercetan brags, that only the Seed of Garden Parsnep dried and powdered, and about half a Drachm of it given in a little white Wine or Bawm Water is a peculiar and a specifick Medicine for Fits of the Wother.

I. D. Rulandus says, that Cow's Dung, or Deer's, or Sows Dung, given in hot Wine presently stops the Fits of the Mother. He also affirms, that linen Cloths dipt in Cows Urine or Dung, and applied warm to the Navil eases the Fits.

Schroder commends Oyl of *Gambanum* used either inwardly or outwardly.

Varignana says, the hair of the Patient burnt, and the Smoke of it received, does wonders.

CHAP

C H A P. III.

*the Defect, Imminution, and disorderly Flux
of the Menfes with Pain.*

§. I.

Women's Health wholly depends upon Nature's convenient Motion and of Blood to be voided by Tomb; so if that affair go generally all things are well: is out of order, when this of Blood preternaturally is suppressed, or is only For this Ebbing and Flow- the Blood gives a Testimony Constitution of the whole If it stop or do but abate, the Body pale: Such there- the *Menstrua* are, so fares a Woman, as to her health. Destruction of them is a com- calamity, incident to young above all others, and is foundation of other Maladies. Only they begin to come at or fourteen years of Age, es sooner, sometimes later. knew a Girl, that had her at five years Old. They at forty five or fifty. At es therefore you try but in bring them. Nor must you them in Women with in whom the superfluous turns to nourishment for the

Child) nor in such as give Suck, or are Sick of any grievous Disease.

§. 2.

When the Flux of the *Menfes* quite ceases, it is called *Suppression*; when they Flow, but not sufficiently and the Patients are Sick, it is called *Imminution*. And though this Flux, when it first comes in young Women, does not exactly observe every Month (for some are Purged but once in three Months) till in process of time there be greater store of Blood; yet then it observes the ordinary time.

Here a weighty Question occurs, What may be the Cause, why this Flux keeps so exact a Period? Here Authors are at odds one with another. Most of them ascribe it to the Moon; because according to the difference of its *Phases* it has a great influence in altering the Humors of Humane Bodies. Yea some attribute so much to the Moon, that in all Diseases in a manner, they look to the *Phases* of the Moon, but oftentimes by tarrying for a more happy aspect of the Moon, they suffer their Patient to die

die. Now though the Moon have a great Power in altering the Humors of Humane Bodies; yet this can by no means be granted; since the disposition also of every subject Body, and of the Plaftick Spirit, which is altogether peculiar, may do much, and especially the course of Life, as experience and Womens own Confession testifie. And this verse does not always hold true;

*Luna vetus vetulas, juvenes nova
luna repurgat.*

Regnerus de Graf thinks, that the Cause is some definite Motions of Nature, not yet discovered. But he explains one obscurity by another. In our Opinion the Flux is Monthly, because the Blood Flows abundantly to the Vessels of the Womb, which nature has made many in number and large for nutrition of the Child, and tarrying there it pricks the little Arteries, and so by the animal faculty is discharged. And when abundance of Blood is sent thither to be expelled, it cannot chuse, but in process of time it must be gathered in such store as to regurgitate into those Vessels, by which it came; for when once way is made, the Blood that is gathered will go that way again.

Definition.

VVE say therefore that a Suppression of the *Menses* is a total preternatural deprivation of the Flux of the Menstruous Blood, which should by right be once in a Month, arising from some fault either of the Blood,

or the Vessels, or from a preternatural organical Constitution of the Womb.

Diminution, is, when the Menstrua Flow not so much as it should.

§. 3.

THE Subject of these Diseases common consent of the Ancients is reckoned, the Womb. Some take the Stomach for the Subject others the Liver, some the Spleen a few the Kidneys. But it is certain that the Blood is the causal Subject or the Proximate and Primary subject: for if the Blood be tenacious, thick, cold and coagulated, the *Menses* stop, because the Blood cannot pass those Vessels, and therefore must of necessity either seek Passage by some other Place, must be retained, and so produce this Suppression.

As to the other subject of this Affection, most properly so called, the Vessels in the Womb, in Vagina, or Neck of the Womb, are obstructed, which especially the lower branches of the Hypogastrick Artery, its Veins excepted: for by Anatomy is now evident, that the Hypogastrick Vessels are not carried to the Womb itself, but to its Neck on each side. And it is proved by this, because the *Menses* come after Women with child. So I knew an honest Woman, who was very Pletoric and had her *Menses* three Months always after she was with Child. There is a History of Guilielmus in tr. de partu felici concerning a Woman, who ten days before her travail voided or five Pints of Water, not by

but by the Vessels of the
we have given you the
of these Diseases, it remains
give you the Symptoms;
the Disease is easie, but the
are difficult, to be known.
before one would know, whe-
the Mals of Blood, or the Vessels
Womb be affected, he must
whether Maids or Women
times have any Sym-
that show the tendency of
to the uterine Vessels?
Place, whether they feel any
in their Loins, Dulness in
Body, Swelling in their
of Appetite and Loath-
Phases of Heat and Cold,
of Breathing, a sense of
about the Genitals and the
Throbbings in divers Parts
Body, in the *Hypochondria*
rumbly, rumbling in the Belly,
of the Blood another way
inary, as by bleeding at
Eyes, or Lungs? At
I have a Maid nineteen
Age, under Cure, who ne-
her *Menfes* by the Womb,
ays by her Ears. Some eve-
sweat Blood. If several,
not all, of these Signs be
it must be concluded, that
of the Womb are either
too Strait and Small,
Cure must be directed thi-
It comes through some fault
Blood, when Maids and Wo-
at the due time, find no sense
or Pulsation about their
and Loins, nor any of
mentioned Symptoms de-
to be in the Genital Parts.
Blood is shown to be thick
by a Cooling, Moist,
crassating Diet, preceding,

a Slow Pulse, slowness in Motion;
Transpiration hindered, Paleness, and
Chilness of the whole Body. Phleg-
matick humours are shown by fri-
gidity in the Genital Parts, excre-
tion of a Pituitous and Viscid Hu-
mor by them, a little, rare and
weak Pulse, Sleepiness, &c. There
are several other Signs, that show
the Disease is present; but without
doubt the Patients own Confession
is the best and the infallible Sign.
You may be assured of it, if Pa-
tients complain of a weariness all
over their Body, of racking Pains
about the Loins, if their Face be
Livid or White, if they breath short,
especially when they go up a Pair
of Stairs, if their Eyes swell, if they
be Pensive, and Lazy; sometimes
when they have lost their Appetite
they vomit and swoon. In a Dimi-
nution all things are more remiss
and fewer in Number.

§. 4. Cause.

NOW we proceed strictly to
inquire into the Causes; for
when the Cause is once known and
removed, the Disease it self may be
known and removed. The *Galenists*
in the stoppage of the *Menfes*
blame a cold and dry intemperature
of the Womb, an Inflammation or
Scirrhus, or Compression of it by
the parts adjoyning, or by a thick
Omentum; they blame the thick-
ness of the Womb, Ulcers and
Scars left by them, or by tearing
the *cory edones* in violent abortion;
they say also the Vessels may be
obstructed by Cold and Gross
Humors. And Blood either too
much or too little may occasion
it.

Among external Causes they reckon a cold and dry Air, going into cold Water, or tarrying too long there, especially when the *Menses* are at hand or actually present, Meat either excessive in quantity, or too Cold and Astringent, abuse of Spices, violent Exercise, too much Watching, Disturbance of Mind, &c.

§. 5.

Paracelsus in *param. l. 4. de origine morb. matricis*, and in several other places, talks much of the Nature and Office of the Womb; namely that it is a peculiar Microcosm in Man; yea, and like Man, it comprehends all the Creatures of the whole World in it self; it has proper Elements and Aliments, by which it is nourished, and the properties of Tartar; therefore he blames divers Tartareous Feculences lodged in the Womb.

§. 6.

Hemont says, the Menstruous Blood is separated by the hand of the *Archæus*, and so is cast out by nature: He says, disordered *Menstrua* discolour young Women.

§. 7.

Sylvius says, the cause of the stoppage of the *Menses* lies either in the Womb it self, or in the Vessels of the Womb: And he holds, that this evacuation does not proceed, when the passages or Vessels designed for this evacuation, are not open, when the Blood is not carried to the cavity of the Womb,

nor to them, or when these Vessels are stuffed with Viscid and Gummy Phlegm.

For the remote Cause, he blames thick and melancholick Blood, pensive Mind of young Women, their sedentary Life, long Sleep, cold Food, a cold, thick, close, and moist Air. He says also, at the time of Pubescence there is a natural apertion of these Vessels (which effect he ascribes to bilious Humors predominating in the Blood at that time) and he distinguishes according to three degrees of it. He attributes therefore the stoppage of the *Menses* to Phlegm and Humid Blood, which by its grossness stops the passages. I question not but the closing of the Womb is often the Cause of this Disease.

§. 8.

We distinguish the Cause of this Disease into Proximate and Remote. The Proximate regard of their twofold subject is twofold. The first in respect of the Blood is its excessive thickness and viscosity, which invert the natural temper of the Mass of Blood, hinder its Fluidity and Fermentation, render it unfit for Motion, hinder the breeding of Spirits, obnubilate the Plat tick Spirit; this Flux is often hindered by the Vessels either not being open enough, or totally obstructed. And the constitution of the Vessels is twofold, either so originally, or grown so in tract of time. Sometimes they are naturally so constituted that though the Blood would pass that way; yet by reason of the smallness it cannot pass, where it seeks a passage by some other

ment ways, to wit, by the
Nose, Eyes, Teeth,
Lungs, or Sweat, as we knew
ance. In tract of time this
of the Vessels is made
certain Viscid and Mucilagi-
Matter, which by degrees
these Genital Vessels, and
that Flux.

These Vessels are stoppt some-
times by thick Pus, sometimes by
Stones; or they are
obstructed by the Omentum, or
much Fat, by the Bladder, or
Rectum, and such
parts, that are Swelled or out
of place, and by any Swelling
of the Womb it self.

Among the remote Causes we
find a weak Stomach, and the
natural things, as contributors
such as a cold Air, cooling of
Hands or Feet by it, dipping
in cold Water, or sitting on a
Stone, Food, that is Acid,
Gross, Terrene, Watry,
thick and Viscid, or endued
with an Astringent Quality. Cooling,
and Astringent Medi-
cines, unseasonable or too much
an idle Life, Passions of the
Excretions or Purgations,
increased, diminished or omit-
ted Swellings, or abscesses after
difficult Travel, a Fall,
and Medicines used

Dropsie, *leucophlegmatia*, Con-
sumption, Inflammations, Ulcers,
Suffocations, and other very dan-
gerous Diseases. In Maids, this Di-
ease does produce in some the
Green Sickness, in others Palpita-
tion of the Heart; in some Barren-
ness, in some a *Pica*, and in some
a Dysentery. But this Disease is
not so dangerous, when it arises,
from external Causes, and in Sum-
mer or Spring time, as in Winter
and Autumn: For the Blood some-
times destroys it self; and then
either a Cachexy, Dropsie or Con-
sumption arises; this corrupt Blood
acts most cruelly upon the Lungs,
and either by eating or ulcerating,
it opens their Vessels, and then
degenerates into a Consumption.

§. 10. Cure.

NOW we will proceed to the
Cure; and first according to
the *Galenists*, who say, the Cure
of this Disease must be varied, ac-
cording to the variety of Causes. If
therefore the Disease arise from ex-
cessive quantity of Blood, they a-
bate it by Phlebotomy either in the
Arm or Foot; as there is occasion,
they commend Frictions, Liga-
tures and Cupping, with and with-
out Scarification; then they order
Semicupes made of Emollient and
Laxative Uterines; but they highly
magnifie Natural, Sulphureous and
Bituminous Baths both internally
and externally, especially when the
stoppage of the *Menses* proceeds
from a preposterous Motion of the
Blood, and it is voided by the Nose
or Mouth.

These things premised, they com-
mend divers both Internal and Ex-
ternal Aperients, and all uterine

§. 9. *Prognostick*.
THE obstruction of the *Men-
ses* is generally a Chronical
and if it be not timely cured,
at first it may not seem very
serious, yet in progress of time it
proves the Cause of divers
Diseases, namely of the

Specificks, of which they have an infinite number.

§. II.

Paracelsus highly commends the Specifick of an Ox's Spleen, reduced to a Magistery or Quintessence for provoking the *Menses*; he also magnifies *essentia solis*, which he calls *resina solis*. His Disciples magnifie the *Scoria* of *Regulus* of Antimony, and a tincture made thereof, *Arcanum Antimonii*, *Sal Philosophorum*, Oyl of Amber, Vitriol, and a thousand other things.

§. 12.

According to *Ipelmont's* Mind, the Medicines for the stopt *Menses* are the volatil Tincture of Coral, *sal chalybis*, and such like volatil things, got out of Specificks.

§. 13.

Sylvius, for a Tough and Viscid Humor, commends both Acids and Aromaticks, abounding with a lixivial Salt as well Fixt as Volatil, and Fixt and Volatil Salts themselves. He prefers Aromaticks above all things, whether they be bitter, or not; namely root of *Aristolochia rotunda*, *angelica*, Mather, Smallage, Fenil, Parsly, Eryngo, Lovage, *Iris* homebred and Florentine, Burnet, Schœnanth, Spikenard, &c. Leaves of Penny-Royal, Savine, Sage, Dittany, Majoran, Garden Rue, Wild Majoran, Mountain Calamint, Mugwort. Flowers of Rosemary, Wall-Flowers, Spikenard, Chamomil,

Saffron, &c. Berries of Juniper, Bays. Most of the Carminative Seeds. Gum Galbanum, *Sagapenum*, Myrrh, &c. He commends the following Physick Wine;

Take of root of Elecampane Drachms, Galangal, Turneps each one Drachm, leaves of Penny-royal, Majoran, Savin, Mugwort each half a handfull Bay-berries, seed of Dandelion Lovage each two Drachms, distilled Cinnamon three Drachms, Mace one Drachm. When they are cut and bruised, put them in a Bag. Put it in a Jug, and Pour a Quart of Wine to it. Let the Patient drink a glass after Dinner and Supper.

They that had rather have Physick may take these following;

Take of Gum *Sagapenum* prepared with Vinegar half a Drachm prepared Steel, white Amber prepared each one Scruple, Myrrh, the best Castor each sixteen Grains, oriental Saffron a Scruple, *Venice Borax* a Scruple, Oyl of Cloves six Drops Mix them. Make forty Pills. Let the Patient take five or six a day before she go to Bed.

He extols all Volatil and Oily Salts, because they do their work kindly and successfully, and the Patient may conveniently take them at any time in Broth. About all things he commends Spirit of Sal Ammoniack, about five Drops or more of it at a time. He commends also, that all Sudorificks and Purgatives are proper here; in a

le he Bleeds, and rather in
Arm than the Foot. He also
uses the external application of
Emmatic Oyntments, such as
Emmentum Martiatum, Oyl of
Chamomil, Fomentations,
Steerns, and the like.
In the Imminution of them he
uses the use of the abovesaid Me-
dicines; but in a less Dose.

§. 14.

Now we will go to our own
Cure, as it is founded on cura-
tions. In the first place
before let the first ways be recti-
fied, then let the Mass of Blood, its
Quantity and Thickness be correct-
ed, if there be any obstruction
in the Vessels, let it be removed,
drawing away, dissolving, and in-
creasing the viscosity of the Humors,
which obstructs the Vessels, by ex-
tracting the Plastick Spirit, to which
the Menstrua, and things that provoke
the Menstrua may be added.

That we may satisfy the first
indication, it is requisite that the Sto-
machus, which is full of acid Cru-
or Humors, should be clear-
ed, to this end Purgatives are good,
which dissolve the Viscidity in the
ways, and remove obstructions
in the Vessels: for instance;

of leaves of Penny-royal,
Mugwort, Savine each
an handful, Vervein two
handfuls, leaves of *Senna* one
handful, root of Rhubarb three
handfuls, *asarum* two Drachms,
asafoetida (which is a great provo-
ker of the Menses) five
handfuls, seeds of Anise, Fenil
two Drachms, Filings of
one Ounce, *Schoenanth* one

Drachm, Bayberries No. vij, root
of Zedoary, *calamus aromaticus*
each half a Drachm. When they
are shred and bruised, put them
in a Bag, and pour some old
Rhenish Wine to them. Let the
Patient take three Ounces once
or twice a day.

Or if a Powder be more accept-
able;

Take of Powder of root of Jalap
half a Scruple, *crocus Martis*,
saccharum aperitivum each
eight Grains, sulphurated Scam-
mony six Grains, destilled Oyl
of Cinnamon one Drop. Mix
them for once taking. It must
be given at the usual time, when
the Menses used to come natu-
rally. Or,

Take of Water of Mugwort one
Ounce, extract of black Helle-
bore six Grains, Steel half a Scr-
uple, Scammony roasted four
Grains, Syrup of Cinnamon three
Drachms. Mix and give it. Or
in form of Pills;

Take of *Pilula de hiera cum aga-
rico* one Drachm, Vitriol of
Mars moderately calcined one
Scruple, Trochiscs of *Alhandal*
half a Scruple, extract of Saffron
six Grains, Oyl of Penny-royal
three Drops. Mix them and
make Pills. The Dose is from
nine Grains to fifteen. Or,

Take of Gum Ammoniaek, *Saga-
penum* each half a Scruple, Resin
of Jalap seven Grains, Magistery
of Amber four Grains, Volatil
Salt of the same six Grains,
destilled Oyl of Myrrh three
Drops.

Drops. Mix them. Make eleven Pills.

If there be evident Signs, that a viscid Load lies in the Stomach, a Vomit must be given, especially if there be Co-indicants, and the Patient be easie to vomit, and it be Spring or Summer time.

After Purging, she may be bled in the Foot. Clysters made of proper ingredients are suitable to tender Constitutions.

Then, for dissolving the Viscidity of the Blood, Salts both Fixt and Volatil are proper; such as a Decoction of the Woods, and opening Roots, with proper Herbs. In this Case I commend the constant use of Volatil Salts, adding Oyl things. Or;

Take of Water of Penny-royal, Mugwort, Rosemary each two Ounces, *aqua vitae mulierum* fix Drachms, Spirit of Sal Ammoniack thirty Drops, Diaphoretick Antimony, prepared Crab's Eyes each half a Drachm, Oyl of Savine ten Drops, Syrup of Orange Peel one Ounce. Mix them.

Above all for a secret in these Cases, I commend Spirit of Sal Ammoniack aromatized, with Oyl of Orange Peel, Savine, Cinnamon, Penny-royal or Mace. Excepting this, there is not a quicker Medicine in this Case, than essence of Myrrh, made with the vinous Spirit of Sal Ammoniack; or, a more compound Medicine, *elixir proprietatis volatile*, concerning which I must acknowledge, I have ever found it successful. Myrrhated, succinated and Martial Medicines

often do the business, especially Iron Spaw Waters. Therefore Filings of Steel prepared may be in the ordinary Drink;

Take of Trochisces of Myrrh half a Drachm, Venice Borax two Grains, the best Castor, Alexander's Mummy each half a Scruple, Oyl of Savine eight Grains. Mix them. Make a Powder. Divide into five Doses. Or,

Take of Filings of Steel, Powder of Nutmeg, Cloves, the best Saffron each one Scruple, Oyl of Castor way six Drops. Mix them. Divide it into four equal parts. Or,

Take of Humane Secundine prepared, Castor prepared, Oyl of Amber six Grains. Mix them for three Doses, half a Scruple each.

The Tincture also or Spirit of Humane Secundine, with a few drops of Tincture of Aloes and Spirit of Sal Ammoniack given in some convenient liquor is wonderfully commended in this case. Decoctions of Savine, Motherwort, Dittander and such things are good.

The following Hæmagogue Water is approved by much experience;

Take of the root of both the *Arifolochia*, Mather, *cassia lignea* each half an Ounce, leaves of Savine, Penny-Royal, Bay Vervein, Flowers of Marigold, Wall-Flower each half an Ounce, saffron, *crocus Martis aperientis* each half a Drachm, *species diarrhædonicæ* one Drachm, Trochisces of Myrrh

with a Drachm and an half,
Scilla half a Drachm,
Conium of *Austria* one Drachm,
Sulphuris five Drachms, Salt
 of *Mugwort* one Scruple. Shred
 and infuse them eight days in
 Water of Penny-royal, Mercury
 half a Pint, Sack one Pint.
 Afterwards destil them accord-
 ing to Art.

have seen several young Wo-
 men cured by it alone. Castor and
 other Medicines are often suffici-
 ent. In this Case *elixir uterinum*
elixir proprietatis, &c. are
 good. And so *Spiritus vitrioli*
 is a singular Specifick in
 this. The following Decoction
 of the Ox's Spleen is highly set

the Spleen of an Ox, of leaves
 of *Basil*, Mercury, Penny-royal,
 each one handful, Flowers
 of *Marigold*, Wall-Flower each
 a Pugn, root of *Aristolochia*
Scilla, Bryony each one Ounce,
 berries three Drachms, *cassia*
 two Ounces. Infuse them
 in sufficient quantity of Baum,
 of *Mugwort* and Penny-royal water,
 then infuse a while in *balneo*
Mariae, afterwards boyl them
 in *vaso clauso duplicato*. Let
 the Colature be sweetned with
 Syrup of *Mugwort* and Cinna-
 mon each a like quantity, what
 is sufficient. If you have a Mind
 to sharpen it, you may do it with
Essentia Martis Zwelferi.

When the *Menses* are stopt by
 a Cold, and a clotting of the
 Blood arising from thence, it will
 be proper to give Antimony with
 it, adding some *sperma ceti*,

especially if a Pleurisy be joyned
 therewithal, as sometimes I have
 known it.

The following Pills are not of
 contemptible use.

Take of Aloes one Ounce, resinous
 red Myrrh, extract of Gentian,
Aristolochia, Dittany, Saffron
 each half an Ounce, Mather, Mi-
 thridate each one Drachm. Mix
 them up with Syrup of *Mugwort*
 into Pills. The Dose is five,
 seven, or more, to be taken every
 day, Morning and Afternoon in
 warm Beer.

All things likewise that imbibe
 an Acid are proper in this Case: for
 when the Acid is imbibed, and
 changed into a third Salt, the Peg-
 cant matter may properly be eva-
 cuated by the Urinary or other
 passages: for instance;

Take of red Coral prepared, Crabs
 Eyes prepared each half a Scruple,
crocus Martis aperitivus five
 Grains. Mix and give it.

But if the Blood flow some other
 extraordinary ways, then it must
 be averted, and the obstructed
 Vessels of the Womb must be open-
 ed; which you may do by Volatil
 Medicines, Baths, and such like
 means.

In General therefore, as we said
 before, all Salts are proper, Fixt
 as well as Volatil; yet you must
 take this Caution, That Volatil Salts
 and such things must be given,
 when the *Menses* are present, but
 fixt Salts, made out of appropriate
 Herbs, must be given before
 their coming. These are Spe-
 cificks, *Mugwort*, Penny-royal,

Wall Flowers, root of *Aristolochia rotunda*, Cinnamon, Myrrh, and Trochiscs of it, Castor, Saffron, Borax: for instance;

Take of Borax one Scruple, quilled Cinnamon powdered half a Scruple. Mix them.

Savine and its Oyl deserve great commendations. The following Volatil Spirits are of great use, to wit, *Spiritus Salis Ammoniaci aromatizatus*, Spirit of Harts-horn, Soot, Secundine, *liquor cornu cervi succinatus*, *tinctura salutis*, *Castorei*, *elixir proprietatis*, especially with a Volatil *Alkali*, *essentia ad Menfes aurea* of our description.

This must be observed in general, that there is no sort of remedy, that has the same virtue in all People. Wherefore unless the virtue in all Medicines be duly observed, and the passive subject be compared with the active object, we shall not always obtain our desired end. In exceeding pertinacious Obstructions of the *Menfes* the stomachick Salt, made of the dead Stone of Spirit of Sal Ammoniack with Salt of Tartar may be conveniently used with ones Meat.

If there be an *Anasarca*, which is apt to attend this Disease, then this following will be proper;

Take of root of *Asarum*, Mather each one Ounce, leaves of Savine one handful, Juniper-Berries two Drachms. Boyl them in a sufficient quantity of Common-Water, adding towards the latter end, of Cinnamon two Drachms, Cardamom one Drachm. Add to the Colature of Spirit of Earth-

worms three Drachms them.

Let the Drink be Elecampane Beer or Wine. In this case Purgatives mixt with Haemagogues will be proper. The following Physick-Ale or Wine will be good;

Take of root of *Angelica*, Lovage each half an Ounce, Galbanum two Drachms, leaves of Rosemary, Motherwort, leaves of Savine each one handful, Berries one Ounce, Cinnamon three Drachms, Saffron one Drachm, Salt of Tartar one Drachm. Mix them for use in a bag.

A Decoction of Rosemary, Wall-Flowers is very good.

If there be the Green-Sickness and a Cachexy, you may joyn Anticacchecticks with Uterines;

Take of *pulvis cachecticus Hammani* half an Ounce, Galingale two Drachms. Mix them for several Doses.

In difficulty of the *Menfes* the following is proper;

Take of Water of Penny-royal ten Ounces, Mugwort half an Ounce, essence of Castor a Drachm and an half, Spirit of Sal Ammoniack half a Drachm, distilled Oyl of Aniseed three Drops, Symplicum of Mugwort six Drachms. Mix them for once taken.

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of Water of Fenil, Penny-royal each one Ounce, *aqua* *destillata* two Drachms, tincture of Tartar one Drachm, *li-* *quor* *cornu cervi succinatus* one Ounce, Syrup of Mugwort half Ounce. Mix them. Or give fifteen Drops of essence of Saffron.

If there be Pain and Convulsions, give the following;

Take of *elixir proprietatis Paracelsi*, tincture of *Opium* each one Drachm. Mix them. Or, Essence of an Ox's Spleen, Mugwort, Baum, *Mars liquatus* each two Drachms, Savine a Drachm and an half, Saffron one Drachm. Mix them. The Dose from fifty to threescore Grains.

Internals joyned with these Internals are extolled, as having finer effect. Excellent Externals may be made of the *Scoria* of Antimony: for in-

Take of the *Scoria* of *Regulus* of Antimony four Ounces. Boyl them in a sufficient quantity of a *liquorem* made of Mugwort or other Specifick Herbs, to the extraction of the redness. To six Ounces of the Colature add of black two Ounces. Mix them. Let two Ounces of this Liquor be poured upon red hot Stones of Iron, and let Women in desperate Cases, receive the Fume by a Funnel.

Others may also be made of Saffron, *Coloquintida*, Myrrh, *Styrax*; and such like things.

Glauber's instrument is deservedly extolled, which by means of a Sponge communicates volatil Salts, especially Sal Ammoniack, joyned with any Alkalifate, to the Womb of a Married Woman. They that have not this instrument, may take a Viol, and pour some volatil Spirit into it: for instance, *Spiritus Salis Ammoniaci volatilis* & *aromatizatus*, and putting a linen Cloth about the Mouth of the Viol, they may apply it to the *sinus pudoris*, the Body of the Viol may rest upon Coals: by thus doing the viscid *Mucus* is dissolved, and the Plastick Spirit is excited.

Baths also, and Fomentations, may be made of Uterine Herbs, for the same purpose;

Take of leaves of Mugwort, Penny-royal, Motherwort, Mercury each two handfuls, Rosemary one handful, Wall-Flowers, and Flowers of Mallows each half an handful, Bay-Berries one Ounce and an half, root of Bryony two Ounces, *aristolochia rotunda*, Mather each one Ounce. Cut and bruise them Grossly, and boyl them for a Bath. But natural, sulphureous and bituminous Baths, are to be preferred before Artificial ones.

If you desire a Liniment, here follows one;

Take of Oyl of white Lilies, Wall-Flowers each three Drachms, *Diacolocynthidos* one Drachm and an half. Mix them.

So likewise Pessaries may be applied in obstructions of the *Menses*. *Mynsicht's* are the best. *Angelus Sala*

Sala wonderfully commends black Hellebore, but because it must be kept a long time, it is to be feared an exulceration may arise. So this following is accounted as a certain experiment;

Take of the Powder of Leaves of spotted Arsmart, gathered when the Sun is in *Leo*, and dried in the Shade half a Drachm, root of black Hellebore prepared one Scruple, with a sufficient quantity of Gum Tragacanth dissolved in white Wine make a Pessary.

But the obstruction, that has its rise from peculiar Diseases of the Womb or its Vessels, or from Diseases of the ways, the falling down of the Womb, imperforation, and other such like things, its Cure must be sought for somewhere else; and Menagogues must ever be added to these Medicines.

In the Imminution of the *Menses* the same Medicines in a manner will do, but in a less Dose. In discolouring of the *Menses*, by Putrefaction, *elixir proprietatis*, with *elixir uterinum Crollii* is proper. Also essence of Mugwort, Baum, &c. is good. *Mercurius dulcis* is a generous Medicine in this Case;

Take of essence of Baum three Drachms, *elixir proprietatis* half an Ounce. Mix them. The Dose is between Fifty and Threescore Drops. Or the following bag;

Take of leaves of *Scordium*, Baum, lesser Centaury each one handful, root of Bryony one Ounce, black Hellebore prepared half an Ounce, leaves of Senna nine

Drachms and an half, large Clove one Drachm, *Sal uterinum* one Drachm. Make a bag for three Pints of Wine.

These things premised, Sick ficks must not be neglected.

In a disorderly Flux of *Menses* all the forementioned things in a manner are proper, especially things that purify the Blood and correct its Acrimony and Viscidity such as artificial Spaw's according to *Kesler's* and *Schroder's* Opinion but natural Martial ones do far exceed them.

§. 15.

Now we will see a few Empirical Medicines. *Johann Agricola* commends the following Pills as a singular secret in the Suppression of the *Menses*;

Take of extract of Bay-berries, Savine, Centaury the less, Marjoram, Carduus each one Ounce, Salt of Baum, Savine each half an Ounce, Oyl of Savine half an Ounce, true borax, Saffron each one Ounce and an half. Make a Mass with Oyl of Cinnamon. Give a Scruple of it Morning and Evening.

He also extols white Flowers of Sulphur.

Thomas Bartholinus commends the Decoction of Pomegranate Pills; *Borellus*, Horehound; *Fernelius*, *semen nigella*; *Glauberus*, concentrated Spirit of Urine; *Johannes Ferdinandus*, ashes of Pease's Dung calcined with half a Scruple of Powder of Saffron.

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Lusitanus magnifies
of which we also use the

Mizaldus commends
drinking of Rue, boyled in
with Hyssop and Anise.

Pauli cries up a Decoction
of Motherwort and Chamomil, with
the Magwort.

values an Onion stuck
with the jaggs of black Helle-
bore roots, casting away the root,
steeping the Onion several times
in Wine, when the *Menses* are near.
is also for a secret, Amber,
Garden Daisie boyled in white

in this Case highly com-
mendable distilled Oyl of Sermountain.

Schroderus cries up the
following Decoction for an *Arca-*
nion provoking the *Menses*;

Take of seed of Millet, Anise, Mistletoe
of the Oak each three Drachms,
root of dittany one Drachm,
Saffron one Scruple. Steep them
a little in white Wine, and then
boyl them gently. The Dose
four Ounces.

Timaeus a Guldenglee, when other
remedies will do no good, com-
mends applications to the Navil of
Trochiscs of *Alhandal*, and he
commends a fume of Savine and
Coloquintida.

Benedictus Faventinus affirms,
that the following Pill put into the
Womb does good, upon his expe-
rience;

Take of Venice-Treacle one
Drachm, Powder of Savine one
Scruple. Mix them.

CHAP.

C H A P. IV.

Of the excessive Flux of the Menses, and the Whites.

§. 1.

THE immoderate Flux of the *Menses* is of two sorts.

1. When the *Menses* Flow in an excessive quantity and too long.
2. When they return sooner than they should. It is generally described to be, *An excretion of too much Blood by the Womb, caused by the opening of the Vessels thereof.*

The Whites are called in Latin *Fluor Muliebris, Fluxus albus, Menstrua Alba, Gonorrhœa non virulenta, coryza uteri, &c.* for a *Gonorrhœa* does not differ much from the Whites, and sometimes they are complicated. It is commonly described to be *a plentiful and frequent excretion of a Phlegmatick, thick Humor, sometimes White, sometimes of another Colour, without Pain, by the Womb: Or rather, an excretion of an abounding inguinal humor by the vaginal Glands of the Womb.*

Some are mistaken in calling this Disease the *Menstrua alba*: for

1. It does not come every Month, neither sooner nor later, as the *Menstrua* do.
2. The Whites last

the whole time from their coming till they quite cease. 3. Whites are observed to come before and after the time of the *Menstrua*. For no Age, the first except (and yet I have a Girl not ten years Old now under my Cure for a Disease) is exempt from this Malady. All which things consider show, that the Whites have nothing to do with the *Menstrua*; though just before the *Menses* come, they are often in most abundance, for reason much of that Matter is that time gathered about the cervical Glands of the Womb.

§. 2. Difference.

THE Whites differ according to the violence of the Symptoms. They continue sometimes a Month, or Months, yea, or years without any great harm, or grievous Symptoms. Hence the great *Platerus* calls them Moderate and Immoderate. And the same may be said of the excessive Flux of the *Menses*.

3. Signs of excessive Menfes.

ND as these Diseases are easily seen, so their Causes may easily be discerned by their Signs. *Pleurora* has its Signs. And the Bloods Thinness and Acrimony, and exorbitant Motion, Blood voided, Pain or no Pain, ending of it, heat and the like, show them. An *Anastomosis* is marked by Causes apt to produce excessive Heat, Venery, hard Labour, Miscarriage, a previous effusion of the *Menfes*, &c. A sign by Pain and Heat about the Neck of the Womb, Pain in passing the Blood, and alteration of Colour, by the *juvantia* and *menstrua*, excoriation or inflammation in the Parts, by which the blood passes. Such Patients are marked with tirefomeness, languishment over their Body, Paleness of Face, loss of Appetite, Heat, Pain in their Loins, Swelling in their Feet, and a thousand things.

4. Signs of the Whites.

THE Whites also need no Signs, as being easy to be known by the relation of the Patient and By-standers. They may be known by the Urine, in which one may observe a Sediment thicker and Cruder than ordinary, watery and without Smell, or may see a sort of Phlegmatick White Streaks: And partly by concomitant Symptoms, Pain

in the Back and about the Belly, Palpitation of the Heart, Atrophy, Dulness in the whole Body, and loss of Colour. The Whites indeed, when *Moderate*, are attended with no grievous Symptoms; but *Immoderate*, both as to the quantity of matter, and the pertinacy of both Causes are attended. 1. With loss of Strength. 2. A Cachexy. 3. A Numbness in the Hands and Feet, and Barrenness. And the excrementitious Humors are sometimes White, sometimes Pituitous like Whey, sometimes Pale or Yellow, sometimes Green, according to the diversity of the serous Liquor.

§. 5. Cause of the excessive Menfes.

ACCORDING to the *Galenicists* the Causes of an immoderate Flux of the *Menfes* are an *Anastomosis*, *Diapedesis*, *Diæresis*, and *Diabrosis*, which are caused by the excessive quantity, Heat, Thinness, or Acrimony of the Blood, by a Blow, a Fall, or a Wound.

§. 6. Cause of the Whites.

IN the Whites they say, the Brain, Stomach, Liver, Spleen, and Mesentery, send their excrements to the Womb, as to the weaker Part, and therefore most apt for reception: nor do they doubt, but excrementitious Humors may be bred in the Womb it self, through the weakness either of the retentive or concoctive Faculty. Therefore they blame the Intemperature and weakness of the Womb, which is often contracted

contracted while they are with Child, from their Travail, Abortion, Contusion, Inflammation, Abscess, or Exulceration.

§. 7.

Paracelsus l. 11. §. de dolorib. *matricis*, makes the Diseases of the Womb, to be of a quite different Nature.

§. 1.

HE says, "The breeding of Diseases of the Womb, is not in the Womb, nor from it. Because every Part, that depends upon others, receives detriment from other Parts. For the Diseases of the Womb are, Retention and Superfluity. According to him, the Womb receives its nutriment from all the Parts once every four Weeks: then it casts out its excrements, and then Women feel Pains in their Back and Head, and Compression at the Pit of their Stomach. The Retention is not in the Womb, but from all the Parts of the Body. He Proceeds §. 2. "For the *Menstruum* in the Womb is not the *Menstruum*, but the Excrement of the *Menstruum*. And therefore tr. 2. de gen. hom. he calls it *Menstrua ejectio* and *stercus matricis*. "Then there ensues a conjunction of these (since the *Menstruum* comes from all the Parts, and some Parts are Morbid) Destructive, Alteration, Conclusion, Mixture of a Good and Bad thing, discolouring and the like. When a Woman finds Pain, there is Oppilation and an excessive Flux.

§. 8. Cause of the excessive Menstrua.

According to Sydenham's judgment, the *Menstruum* proceed through some fault either the Blood, the Womb or its Vessels. Through the fault of the Blood, often as it is too thin or too thick especially at the time of the *Menstrua*. And the Blood is made by the Heat of the Air, Sun, Fire, Bath, &c. also by too Spirituous and Aromatick Food, by the Passions of the Mind, as Anger; and by excessive Motion of the Body, Running, Dancing, Rubbing, &c. by over long Watching, by unusual evacuations of Bile, being either omitted or quite stopt. Sydenham says, it is through some fault in the Womb, or its Vessels, when they are either too Lax, or Moist, through abuse of watry things, eating too much horary Fruit, Peaches, Grapes, &c. especially when the *Menstrua* are at hand, because at that time about the Womb is open.

§. 9. Cause of the Whites.

AS for the Cause of the Whites when Moderate, and of continuing a long time without a considerable damage, he makes the efficient Cause to be some Acid or Austere Ferment produced in the Womb, but the Mass of Blood is not very much changed. He likewise makes the efficient Cause of immoderate Whites to be the same, but acting (according as different Symptoms are raised) diversely,

material Cause is the Mass of
vitiated divers ways; yet he
that the Whites may be pro-
duced, without any such uterine
ferment, if so be Pituitous Humors
are in the whole Body, and be-
cause of the Womb, and so
of the Body. Our Author
thinks that in this Disease the Womb
is affected in a twofold manner, to-
wiz, immediately, the Glands, espe-
cially the Pancreatick, being pri-
marily affected, which send the
Ferment to the Womb: Secondly im-
mediately, these Glands not being
affected, if namely the Womb have
been affected Cold externally.

Therefore he holds, that the pri-
mary Cause of the Whites, must al-
ways be sought in the Womb; but
the secondary Cause, and that which
propagates it, is in the Blood, and other
Humours blended with the
Blood, and with it tending to the
Womb: And he proves that the
Whites can neither proceed from
the Blood, nor from Spirits. He con-
cludes therefore, that the Cause is
in the Blood, and the more viscous or
serous the Whites are, the more
serous the Blood then is,
according to the diversity whereof
it appears a diverse colour in
the *Menstrua*. And he derives it from
Acrimony, which turns
the Blood into something like

Among the antecedent Causes, he
in the first place reckons excessive
protracted grief of Mind,
which is a great breeder of a noxious
Ferment, but especially of an Austere.
Such Acid and Austere in Wo-
men, he says, an unexpected Fright
is the most certain Cause. He reckons
also the abuse of Acids, and
that the Womb is immediately

affected by the external Cold, so
that according as it is disposed to
the Whites, so Women are more or
less apt to catch this Disease. He
says, that in the Whites the Womb
is so vitiated, that the Blood in it
is corrupted, which according to
the Variety of the Fault in the
Womb, Varies much in regard of
Colour, Smell, and Quantity. And
he holds, that as the uterine Fer-
ment is more or less Acid, Austere,
or Sharp, or any other way Vitious,
so it will in a different manner cor-
rupt the Blood, that is carried to
the Womb.

So likewise the Blood being di-
versely affected by other Diseases be-
ing or having been in the Body, will
be corrupted into a different Hu-
mor by the same Ferment. So that,
according to him, the diversity of
the Humor in the Whites, depends
sometimes upon the diversity
of the corrupting Ferment, some-
times upon the diversity of the
corrupted Blood, and sometimes
upon both.

§. 10.

HAVING already considered o-
ther Mens Opinions, we will
now give you *our own* concerning
the Causes of these Diseases. And
the Cause of them both must de-
pend upon the Blood's being too a-
bundant, too thin or sharp; or
upon the Vessels which suffer either
an *Anastomosis*, a *Diarexis*, or
(which is very rare) a *Diapedesis*;
or externals, to wit, an over hot
and thin Air, Food or Physick, that
is Hot, Inciding and Attenuating,
or Menagogues, or things that open
the Orifices of the Vessels, especially
sharp, cutting, pungent Particles,
excessive

excessive Watching, over much Exercise of the Body or the Parts of it, Riding, Running, Dancing, Playing at Ball, or at any other Play, sudden Passions of the Mind, Fright, Anger, various Excretions of Blood suppressed, Misfortune by a Blow, Fall, Wound, Ulcer, and the like. For according to Nature Women find a turgescence of Blood at the time of Menstruation; they have a Pain in their Back, a Throbbing and Racking in their Loins, a Weariness and Dulness in their Limbs, Head-ach, an Inflation of the *Hypochondria*, and then comes the excretion of Blood by the *Anastomosis* of the uterine Arteries. And we question not but a too great laxity of the Pores may be the Cause of this Disease, which is usually caused by divers moist things.

§. II. Cause of the Whites.

W^E think, that the Cause of the Whites, is a vitious *Serum*, corrupted in the vaginal Glands, sometimes Purulent, but often Serous, flowing out of the Glands of the Womb. *D. Mich. Bernhard Valentinus*, one of the College of the Curious, and our Friend, discourses excellently well of this subject in a Learned Epistle, *de nova Matricis & Morborum Muliebrium Anatome*, saying, "The last and worst corruption of the seminal Liquor is in the Disease, they call Womens Whites, which is proper to these Glands, and is indeed nothing else but a *coryza Uteri*, proceeding from a continual abscess, and most Fetid Corruption in the vaginal

Glands. He proceeds, "For morbid Tyrant, is a putrid Tumor in the glandulous Parts, which frauding not only the adjoyning, but all the Parts of the Body their nourishment, precipitates into a putrid Liquor. This is the Cause by the steems of the Body, headiness of Eyes, and Cheeks, uncomeliness of the Limbs, which is obvious even to Women. He says it is, that a kind of Cachexy accompanies this Disease, in as much as the *Viscera* being defrauded their nutriment do flag, and the vital Ferments decay exceedingly, especially the Stomach, which is wanting both Fewel and Fire, knows neither how to select nor volatilise the Meat; but turns it into a putrid Mucilage, which being no way corrected, grows where it can, into the Veins, and is nothing but an useless loach. At Limburg I opened a Woman forty years of Age, that died of this Disease, and found the Glands of her Womb swelled and hard about the bigness of Pease. He also sometimes Chyle may be voided, namely, when the Pores of the Arteries are so open, that Chyle can pass through them. And thus we have seen true Purulent Matter voided from an Ulcer in the Womb. We, as well as other Physicians, hold, that this Disease may arise from too much Thinness and Accomony of Serum.

We blame in this Disease, not the obstruction, but the over Laxity of the Pores and Glands, when tuitous, Serous, and Sharp Humors gather thereabout.

*Prognostick of the
five Menfes.*

to the Prognostick of the
immoderate *Menses*, we
observe, that all immoderate
of them, if not of it self,
least by accident, is dange-
especially in elderly People,
it continue long, for besides
waits the strength, it is the
of divers Diseases, to wit, of
Anasarca, *Leucophleg-*
Cachexy, straitness of Pores
the whole Body, and espe-
in the Womb, of Inflamma-
ulceration, &c. and of other
threatens an Atrophy, be-
when the Blood is diminished,
force enough in it, so as
Particles fit, for nourish-
may be thrust forward strong
to stick to the Parts, that
be nourished.

her belong the following A-
mus of Hippocrates;

A Woman that
Vomits Blood is
cured when her
Menses come.

A Womans *Menses*
discoloured, and not co-
ming always in the
same manner, do indi-
cate that Purging is ne-
cessary.

—5—39. { If a Woman, who is nei-
ther with Child, nor
lies in, have Milk,
her *Menses* have left
her.

—5—50. { If you have a Mind to
stop a Womans *Men-*
ses, clap a large Cup-
ping-Glass to her
Breasts.

—5—57. { When the *Menses* a-
bound, Diseases do hap-
pen; and when they
stop, Diseases proceed
from the Womb.

—5—61. { If a Woman's Purgati-
ons do not come, and
neither Chilnes, nor a
Fever follow, and if she
loath her Meat, you
may reckon her with
Child.

—6—29. { A Woman is not trou-
bled with the Gout, un-
less her *Menses* have
left her.

When this Flux lasts a pretty
while, it may be feared it will last a
long time, because the Part is ac-
customed to the Flux.

This Disease is easily cured in
young Women, but not so in the
Elder sort, because here the Fi-
bres, of the Arteries and Veins are
solid and callous, and are not so
capable of Astriction, yea, often-
times the Disease proves incur-
able.

§. 13. *Prognostick of the Whites.*

BUT as for the Prognostick of the Whites, it is a more lasting Ail, especially in old Women, Cachectick, such as have had their *Menſes* long stopt, or quite gone, in Maids or Widows, that are troubled with the Green Sickneſs, or such as have had some tedious and grievous Disease of the Womb, and whose cervical Glands are hardned or any other way hurt; for in old Women this Disease is not so easily cured, because in them the Fibres are more immoveable, and when the Pores of the Glands are once detorted, they constantly remain so, nor are they easily reduced to their pristine Figure.

Yet it has little danger in it, unless it prove of long continuance, and be very grievous in regard either of it self, or of the Cause whereby it is produced. For then indeed it occasions some grievous and very dangerous Diseases.

§. 14. *Dietetick Cure.*

AS for the Cure of the immoderate Flux of the *Menſes*; we think, the same must be insisted on here, as in other excretions of Blood, which has been declared before: For this differs but very little from the Cure of other Hemorrhages.

But in the Whites let the Patient use a serene and warm Air, at least let her avoid Rain and Cold. The Food must be contrary to the peccant Humour; and above all things let them forbear Acids, those Ene-

mies to the Serum and Galls. Hence we observe in Holland this Disease is very frequent, because Women at the Table eat Salads immoderately. They must also be of easie Ferment and good Juice: Sometimes it will not be amiss to miss Supper, but little. The Motion of the Body and Exercise must be Moderate. Sleep and Rest must not exceed bounds, because all excess is hurtful, for as idleness makes the Body sluggish, so

*Attendant juvenum vigilata
pora noctes.*

All Passions of the Mind, especially Grief, which may excite this Disease, must be avoided, agreeable ones must be moderately exercised. The excreta and retentives must ordinarily correspond, especially to the quantity of what is retained.

§. 15. *Pharmaceutick Cure.*

THE Pharmaceutick Cure of the immoderate *Menſes* according to the *Causes*, is the same, which was proposed for the immoderate Flux of the Hemorrhoids. For first of all, for Retentions sake, they bleed in the Neck, and in this Case they will have a great Quantity of Blood taken away; they commend frictions, Ligatures, and Cupping-Glasses. To carry off the Bilious and Stagnant Humors, that abound in the Blood, they prescribe Purges twice or thrice a Week; they also sometimes allow of gentle Vomits, in

frequently make Revulfion.
they give divers Juleps,
Electuaries, Pills, and
corroffating and Astringent
proposed in the said
adding, if there be occasion,
Reverius highly extols
following;

Shells of two new laid Eggs
of Frankincense, Maltich.
half an Ounce, Perl prepared,
Coral prepared, Amber each
Drachms, Bloodstone, Emel-
prepared each half a Scruple,
Barly-Flour two Pugils,
Whites of Eggs. And, if
be occasion, add a little
Wheat-water, and make two
which must be baked in
oven, till they may be Pow-
The Dose is half a Drachm,
Drachm with Sheep's Feet
early in the Morning.

may find more of the An-
among the empirical Medi-

§. 16.

cured a certain Wo-
man, who had had this Flux
with Fainting a long time,
her Oyl of Vitriol in
Water, and a Drachm of
He also commends
of Corals, which is made
Pumice;

Coral half an Ounce, Oyl
ydrles one Drachm, Oliba-
one Ounce, melted Salt two
When they are mixt,
them in the fourth De-
of a Reverberatory for
hours, or more. Then

make an Ablution with Plantain
Water.

Crollius, his Disciple, commends
the Electuary of *laudanum* in void-
ing of Blood, and excessive evacua-
tion of the *Menses*, with *crocus*
Martis, and red Coral.

§. 17. Cure of the excessive Menses.

SPlutus Cures the Menstruous
Flux produced by an over thin,
Sharp and Serous Blood, by abtain-
ing from all Non-natural things,
that corrupt the Blood, or at least
by moderating them, especially,
when the time of the *Menses* is
near, by keeping from all Heat,
Spirituious and Aromatick Food,
generous Wine, and chiefly its Spi-
rit, from Anger, violent and long
motion of the Body. He commends
divers Emulsions made of Almonds
and white Poppy Seeds, Opiates
also are good. For evacuation of
Bile, he commends Tamarinds,
which also thicken the Blood; as
all Aultere and Bitter things, com-
monly called Astringents, do. Such
are the expressed or unspissated Juices
of moist unripe Fruits, Verjuice,
Acacia, &c. And if there be much
Serum lodged in the Blood, he
judges it should be evacuated by
Hydragogues, given a few days be-
fore the time of the *Menstrua*, if the
strength will bear it. But if an
over lax Constitution of the Womb
be the Cause, care must be taken
to avoid all external nocent Causes,
and to amend the damage receiv-
ed, and the too great laxity in the
Womb: for which purpose Astring-
ents are good, which may be

given in form either of a Powder, or Pills, Electuary, or Mixture; or in what other form may be most acceptable to the Patient, so that she may persevere some time in the use of them. He also commends a fume of Mastich, Frankincense, and red Roses. He likewise approves of Fomentations made of divers Astringent Roots and Herbs boyled in red Wine, and applied outwardly.

§. 18. Cure of the Whites.

THESE things premised, our next work is to treat of the Cure of the Whites, according to SYLBIUS his way, which he says must be varied according to the diversity of the Cause. If therefore the ferment of the Womb be Acid, the primary Cure of the Whites will consist in the amendment of this vitious Ferment, and the Secondary in the correction of the whole Blood. Therefore the preceding Causes must be taken care of, such as Cold, grief of Mind, Fright, Abuse of Acids, &c. Then the Acid-Austere and sometimes sharp Ferment, may very well be corrected by pure volatil Salts, such as Spirit of Sal Ammoniack; and temperate oleous things are very useful in amending a sharp Acid. And for correcting the tainted Blood, which is peculiarly corrupt, and occasions the Whites, or sometimes makes them worse, he says, divers both Alteratives and Evacuators must be used according to the Variety of the Cachexy.

§. 19.

HAVING done with other remains that we give you our own Cure, founded upon reason. The Cure of the excessive Flux of the Menstrua, differs very little from the Cure of other Hemorrhages: External or Topical Medicines in this Case, be only applied to the Womb, as to the Part affected.

The Blood therefore, and the enraged Uterine Spirits, must all be quieted, which may be attained by giving gentle Laxatives and Astringent Uterines; if there be a Plethora, by bleeding in the Arm; and, if Serous Bilious Humors abound, by gentle Purges of Tamarind, Rhubarb, which we commend the ordinary Drink, *Elect. P. Tamarind*, &c. Then we fall to Incrassating; for which pose all Earthy Glutinous are good: for instance the following Electuary is excellent;

Take of old conserve of red one Ounce and an half, Comfrey half an Ounce, Quinces preserved three Drachms, *confectio de hyacyntho*, rai prepared each one Drachm, Amber prepared, Ivory prepared each half a Drachm, *pulvis niolæ compositus* one Scruple of Quinces, Myrtle what is sufficient, make an Electuary according to art.

Take of red Coral prepared, Stone prepared, Bole Arm true Unicorn's Horn, Plantain each three Drachms

Gold two Scruples, *Laudanum Opiatum* five Grains Mix with Syrup of Plantain or what is sufficient. Make Electuary.

Also distilled off Bole Armenick excellent in stopping the Or,

of *Diafurdium* half an Ounce, red Roses one Ounce, Dragon's Blood half a Drachm, powder of white Henbane seed two Scruples, Man's bones calcined, *crochisci de terra sigillata*, *virium Martis* each one scruple. With Marmalade of Quinces what is sufficient, make Electuary. Let the Patient take the Quantity of a Filberd or Chestnut at once.

is highly valued in this Case of tincture of Corals, tincture of *antiphthisica*, tincture of Vitriol, tincture of *Martis astrin-* gent, *spiniola Crollii*, *species diaphantaginis Mynsichti*, *stypice ejusdem*, Essence of *Sylvis* is above them all. In Persons, where the Humors are sharp, a Diet of Goat's or Milk is excellent. In extremities must have recourse to Anodyne for instance;

of red Coral prepared, Yellow Amber, Bole Armenick, Dragon's Blood each two Drachms, Seed of Plantain one Drachm and an half, *Laudanum Opiatum* three Grains, *extractum croci Martis* one Scruple, Syrup of dried Roses what is

sufficient. Make an Electuary according to art.

If Arterious Blood come, Water of a Stag's Heart, and of the Velvet Head of a Stag is admirable, and now and then this, or some such Potion may be given; adding some Opiates, which do the whole business.

Take of Water of the Velvet Head of a Stag, Shepherd's-Purse each one Ounce, *Laudanum Opiatum* one Grain, Moss of Man's Skull six Grains, Syrup of Coral half an Ounce. Mix them for once taking. Or,

Take of Water of Plantain, Purslain, *Cordialis Saxon. frig.* each two Drachms; Bloodstone prepared half a Scruple, *pulvis spiniola Crollii* four Grains, *Laudanum Opiatum* one Grain, Syrup of Quinces three Drachms. Mix them. Or in form of a Powder;

Take of *pulvis stegnoticus* two Scruples, *Laudanum Opiatum* one Grain, *crocus Martis astringens* two Grains. Mix them.

All testaceous things, which have a Virtue of Correcting the Acrimony of the Blood, and of closing the Apertions of the Vessels, are proper here. And so are things, that expel the corroding Humors by Sweat or Urine; to which purpose Decoctions of the Woods or Essences made of them, do conduce; Receipts whereof we have given you before. *Rodericus à Castro* magnifies this;

Take of the Juice of Asses Dung,
Syrup of Myrtles each half an
Ounce Water of Plantain three
Drachms. Mix them.

Or this following may be given;

Take of Chalybeated Styptick red
Wine two Ounces, Gum Arabick,
Tragacanth each half a Drachm.
Mix them.

Here also will be proper things that sweeten and dilute the Acrimony, such as watry things, Whey, &c. Thus not long since I cured a Girl, who had been troubled with this excessive Flux, for above a year, by drinking twelve Ounces of Juice of Birch every Day, for fourteen days together.

Outwardly also, as in other Hemorrhages, Astringents, Incrassants and Anodynes may be applied to the *Hypogastrium*, *Pubes*, or other Parts: So Vinegar applied to the *Hypogastrium* either with linen Cloths or with a Sponge, is good. Also *Emplastrum Stypticum* or *ad rupturam Fernelii* does help; a Decoction of Alum often does the business. A Pessary soaked in a Decoction of Swine's Dung is of great use. Or;

Take of the Moss of a Sloe-tree, root of Tormentil, Bistort each one Drachm, Galls one Scruple, *crocus Martis astringens* half a Scruple. With a sufficient Quantity of *Acacia*, make a Pessary. Cover it with red Silk. Tye a thread to it, and use it.

Mr. Boyle cured a Gentlewoman who had had an Uterine Hemorrhage for four Months, only with the Sympathetick Powder made of Hungarian Vitriol. And she afterward so obstructed there that she was very ill for want of *Menfes*, and he was forced to evoke them again with tincture of Amber.

Wherefore I have in an Intermittent Flux of the *Menfes*, apply my Styptick Martial tincture with extraordinary good Success.

I also highly value linen Cloths wet in Vinegar, and often apply to the Breasts.

Dung's also of Animals, as Swine and Asses, tied in a Bag, boiled in Vinegar, and applied to Women have often excellent effect. Or linen Cloths may be put in the following Decoction and applied;

Take of root of Tormentil, Bistort, Comfrey each half an Ounce, leaves of Plantain, Money-wort each one handful, Shepherd's Purse, knot-Grass each half a handful, Agrimony, Nutmeg, red Sanders, Pomegranate Flowers each one Drachm and an half. Boyl them in Smiths Water, and apply it.

Baths also or *Injections* may be made of those things.

The following Epithem failed us;

Take of Water of Frog-Spaw, Nightshade each two Ounces, Vinegar of Roses, *saccharum turni*, *sperniola Crollii* each a Scruple. Mix them.

Unguentum Stypticum My-
nass. mixt with divers
do not want com-
Bourgeois commends this

roots of Eryngo two hand-
boyl them in Wine. Let
wash well Morning and
evening, and then apply them
warm Cloths, after wash-
She must begin to wash
her Ears, then her Neck,
the whole Spine to the Os Sa-
Afterwards she must Anoint
the Womb.

has seen some cured with
Kenedy in three Days, who
by no other means be Cu-

do not disapprove of Cup-
Glasses or Ligatures.

§. 20.

Let us briefly see the empi-
rical Medicines.

Proetus in the excessive Flux
of the *Menses*, commends Syrup
of Dung.

Proetus commends Jasper stone,
others a dried Toad, hung a-
round the Neck.

Theod. de Bry his
is Shepherds-Purse and
put in ones shoes.

Powder of Dead Nettle,
soaked Sponge is commended
generally; and the Powder of the
root of a Hen put into the Ori-
fice of the *Pudendum* is highly va-
lued by *Crollius*.

Digby's experiment is a Drachm
of Powder of Man's Skull, infus-
ed a Night in white Wine and
Drunk.

Rodericus à Fonseca highly ex-
tols this following;

Take of dried Mastich-Tree cut
two Ounces. Boyl them in
eight Pints of Water. Let her
Drink it for several Days, espe-
cially when the Flux is Immo-
derate.

Or four Ounces of Water of
Sulphur may be given for a
Dose.

Grulinius commends the Furne
of dried Oak leaves which may be
received under her Cloths.

Joannes Hartmannus in the
excessive Flux of the *Menses* takes
a Girdle, sows green leaves of black
Hellebore to it, and girds it about
the Loins.

Casp. Caldere de Heredia says,
a Bath of a Decoction of Alum,
is a most effectual Remedy, if it be
repeated four times.

Joannes Johnstonus his Speci-
fick is the Cuticle of Geese Feet,
dried, and given from half to a
whole Drachm.

Domin. Leo commends cold
Water, in which the Patient must
sit.

Ambr. Paræus extols *Quin-*
ces roasted in the Ashes, mixt
with Bole Armenick and Myrrh,
and put into the Neck of the
Womb.

Henricus Petreus commends
root of white Water Lily, boyled
in Wine and drank.

Primrose commends *Sal Prunella* diluted with Water or Juice of Plantain.

Riverius reckons the taking a Drachm of the Powder of Chestnut for a secret.

Joannes Schroderus has the following experiment. A Cloth dipt in the Menstruous Blood, must at a certain time be stuck into the Bark of the Root of a Cherry-tree opened. Some give the Patient her own Menstruous Blood.

Sennerius uses Asses Dung inwardly and outwardly.

Take of Juice of Yarrow three
• Drachms, Sugar one Ounce or Syrup of Coral. Give one spoonful.

Some commend the taking a Drachm of *Filipendula* root.

Solenander has often tried the following experiment;

Take of the Flowers of Nuts, when they are Ripe, and falling, give a spoonful for several Days in the best Wine upon a fasting Stomach.

§. 21. Cure of the Whites.

THESE things premised, let us now briefly see the rational Cure of the Whites, which differs not much from the Cure of a *Gonorrhœa*. The Cure therefore of this Chronical Disease consists in a Correction of both Peccant Causes by convenient Medicines, in a Mitigation of the most urgent

Symptom, and in Corroborating the Cervical Glands and Uterine Spirits.

Both Causes are Corrected especially by Aromatick Balsams, such as roots of Galangal, Bala Florentine *Iris*, Elecampane, &c. Among Herbs these are proper Mugwort, Motherwort, *Savindium*. These things also are Bay-berries, Aniseed, *Daucus*, red Coral, Crab's Eyes, Ch Shavings of Harts-horn, and Skull. Volatil Salts are not to be despised, as being very useful in tedious Diseases, and in correcting Acido-Austere Liquors. According to the different ways whereby each Cause offends, several receipts of these things may be prescribed, both to be taken inwardly, as Decoctions, Physic Wines, Pills, Powders, Electuaries, Mixtures, &c. And outwardly, Fomentations, Fumes, &c.

Gumms and Resins are very good in this Disease, and Turpentine better than any, which, in a *Gonorrhœa*, so also in this Disease is of great Virtue, because it is a disease of the Glands, and Li Aromatick Oyls and other things may be used in this Case. What things premised, we ought to carry off the corrected Humors either by Phlegmagogues or Purgatives. So also Rhubarb and Turpentine are good, because they moderately astringe and consolidate. The Evacuators may be Pills of the Gumms, *Jalap Majores*, tincture of Jalap, or the following Medicine in Wine;

a Scruple to half a Drachm.
Or,

Take of Conserve of Rosemary
Flowers three Ounces, Shav-
ings of Harts-horn, Magistery
of Amber each three Drachms,
lapis osteocolla one Drachm
and an half, Shells of Hazle-
Nuts Powdered half an Ounce.
With Syrup of red Roses make
an Electuary. Let the Pa-
tient twice or thrice a Day
take the Quantity of a Chest-
nut or a Walnut of it.

Here also *tinctura Antiphthi-
fica* joyned with *Anodyna*, and
given often, will do good.

We often use to cure this Di-
sease with one only slight Remedy;
and, unless there be something
else to hinder the Cure, we dare
engage this will perform one. It
is the following Powder, which
we often repeat;

Take of Egg-shells calcined half
a Drachm, Vitriol of *Mars*
from six Grains to ten, and
there may be added to this
Powder, Camphore three Grains,
Laudanum Opiatum one Grain,
Saccharum Saturni five Grains.
Mix them.

For all Nitrous, Saturnine, and
Aluminous Medicines are proper.
This following will not be incon-
venient;

Take of Egg-shells calcined, white
Amber, *Osteocolla*, Mother of
Pearl prepared, *alumen plumo-
sum* each one Drachm. Mix
them.

leaves of Endive, red
white Melilot, *St. Johns*
each half an handful,
of Mugwort one hand-
root of black Hellebore,
prepared each half an
Seeds of *Carthamus*
Drachm, Rhubarb half
Ounce, root of Bryony three
large Cloves two
Salt of Tartar two
Mix them. Make a

ferous Whites the following

Rob of dwarf Elder two
Refin of Jalap seven
Mercursus dulcis ten
Mix them. Make a

When the Humors are evacuat-
you may with greater safety
the Whites; and here all
are good which strengthen
acid Glands and the Spirits.
which purpose Cinnabarine,
Antimoniatic, Succ-
and Lignous Medicines do
a singular Energy and
And all Catarrhal Bal-
such as Myrrh, Amber,
Camphore are proper, because
stop defluxions. The fol-
Powder is excellent;

of Cinnabar of Antimony,
Magistery of *Saturn*, Amber,
Mercurium Martis Cachecti-
Cuttle Bone each one
Ounce, *Laudanum Opiatum*
Grains. Mix them. Make
Powder. The Dose from

them. The Dose is half a Drachm.

Tincture of Coral prepared with Spirit of the Woods, often giving thirty drops of it at a time is an excellent Remedy. Cuttle Bones also because of their special properties (whereby, besides their general use in correcting a morbid Acid, they also are good in the Whites and *Gonorrhæa*) may be used.

And several things may be put in ones Drink : for instance ;

Take of Flowers of white Roses, white Melilot, Endive each one handful, roots of *Filipendula*, Water Lily each one Ounce, Mastich Wood one Ounce and an half, Mistletoe of the Oak half an Ounce. Mix them. Make a Bag.

For the inveterate Whites we, as well as *Bartholine*, commend Emulsions made of Chalybeate Water, adding some Powder of Ivory.

Externally Baths are good, made of Sulphur and Alum, and other Astringents; also *Inseffus*, Fuimes, Unguents, Plasters, &c. prescribed before. But in this Case an Injection into the Neck of the Womb of a Decoction of *Guajacum* is excellent good; or a Catarrhal Fume may be received, made of Mastich, Amber, Frankincense, and other moderate Astringents, as we use to do in a *Coryza*.

Among empirical Medicines Authors commend these following;

Joannes Agricola commends *oleum Martis viride*.

Louyse Bourgeois orders the Patients to eat twelve citrul Seeds and to drink after them. This is very good for Whites.

Hartman. Corbeus accounts as a secret, to give every day one Drachm of green *Filipendula* root in black Wine. He also commends an Unguent made of Clary and Butter, wherewith the Woman must Anoint her Bell to the Pubes. He also magnifies a Fume of Sage, if it be received into the Womb.

Digby commends the Fume of Sulphur of Antimony.

Rodericus à Fonseca commends Mastich-tree Wine as an approved Remedy.

Petrus Forestus gives us this following as an experienced Medicine;

Take of the Jaw of a Pike, the Head of a Capon dried in the Oven half an Ounce, Date Stone two Drachms, Coriander prepared, Aniseed roasted each one Drachm, root of Water Lily half a Drachm, Sugar of Rose three Ounces. Make a Powder, and give some of it in red Wine.

Abraham Frambesarius commends a Decoction of *Guajacum* Drunk in the Morning for seven days above other things.

Grælingius saw an old Woman cured of this Disease, who took

Cloth wet with the Whites,
 and lay it in the Oven, upon
 they ceased.

Mercurialis pro-
 he has cured this Disease by
 a Drachm of Hares Runnet
 Decoction of Oak Leaves, for
 ten days.

Mercurialis cured it with a Deco-
 of Pine and Mistletoe.

Reinerus Solenander commends
 the taking of new Milk boyled,
 with Gold quenched in it, to the
 Consumption of a fourth or third
 part.

Ludovicus Septalius says, that
 Salt Baths are a very present Re-
 medy.

CHAP.

C H A P. V.

Of Barrenness.

§. I.

Great is the obscurity and blindness of Physicians about the Generation and Birth of Man, so that the Sacred Writ it self seems to intimate the same, *Eccl. 11.* Before therefore that we come to the Disease, we will discourse the Work of Generation. Careful Dame Nature has three ways of Generation. 1. Out of Putrefaction; as all or most insects. 2. Out of Seed committed to the Earth, which after Fermentation germinates; so grow Plants. 3. By *Epigenesis*, that is, out of an Egg, as most Animals are Born, and the most noble of them, Man, according to *Van Horn*, *Kirkringius* and *de Graaf*, who maintain, That in Women's Testicles there are Membranaceous little Bladders, full of Humour, which they do very well style *Eggs*; and they demonstrate that Man is generated of such an Egg, and that there is a very fruitful Ovary in Women. The Vulgar sort of Physicians indeed do hold, That a Woman's Seed is contained in her Testicles, is mixt with the Man's in her Womb, and that so a Conception is made. But *Harvey*, in his excellent tract *de generati-one animalium p. m. 2.* says, That

all manner of Animals, even Viviparous, yea, Man himself bred of an Egg, and the first conception of them, out of which *Fœtus* is made, is very Eggs. *Astotle* thinks Conception is made out of the Menstruous Blood. But the most received Opinion concerning the manner of Conception is, That every Egg in its proper Receptacle or Testicles, is Fecundated by the virile contact, that the Fecundated Egg does Day by Day encrease; at length through the necessity of Place and Site it is excluded thence into the Womb, and there it ferments, till it hath received all the Lineaments or Parts therefore *Steno* says, That every Womb, while it has a *Fœtus* in it is with Egg. Which Opinion has already been proved by many Reasons and Experiments. We conclude therefore with *Regner Graaf*, and others, that those Vesicles, which the Coat of a Woman's Testicle does involve, are true Eggs out of which, and in which Man's Body is Generated: These Eggs are Fecundated by Spirits exhaled from the Man's Seed, and by the benefit of the glandulous Body discharged into the *tuba Fallopæa*; through which they are conveyed into the Cavity of the Womb. And hence it may certainly conclude

that these Eggs ought to remain in Womens Testicles, till they are Fecundated by a virile Semen; for that you can no where see the Membrane of the Testicle perforated, and therefore it cannot give passage to the Egg; but when the Egg is fecundated with the virile air, at that time a certain glandulous Body is Excrecent, which affecting the Membrane of the Testicle draws the Egg from another, which is done, this glandulous Body vanishes, and the Woman's Testicle is reduced to its pristine State.

Wherefore Dr. Charleton lib. de Semine p. m. 78. says, the geni-er is reckoned most Fruitful and full of Spirits, which is far and above strongly ejaculated. And so the Noble de Graaf quotes the Opinions of the best Authors about Conception and Woman's Seed, in 3. de Mulierum Organis. To save for brevities sake I refer my Reader.

Description.

Barrenness is described to be, either an Impotency to Conception through some fault in the Womb, or the Ovary, or its Vessels. Here we shall only examine Barrenness, so far as it concerns a Woman and her Eggs.

§. 2. Part affected.

By the consent of all Physicians the Womb is acknowledged for the Subject: Though some alledge, that it has sometime happened, that a Woman has vomited a Child of a Fingers length. See Salmuth

concerning this Conception. And so Bartholine relates, how a Bitch and a Cat brought forth their young ones at their Mouth, and Expired. Some also affirm, that a Fetus and a Mole have been conceived in the tubes of the Womb; but these things are rare. We take for the Subject, the Womb with the *tuba Fallopiana* annex to it, and the Woman's Ovary.

§. 3. Diagnostick.

THE Signs of this Disease are manifest; for such as are Barren, either bear not at all, or very seldom, and they breed but Weak and Tender Children: But all the contest often is, whether the Cause lie in the Man or the Woman? This causes Grudges and Litigiousness between a Man and his Wife, while the one accuses the other of Impotency. For the deciding of this controversie, Antiquity has proposed several ridiculous things: for instance; Take each Married parties Urine, and Pour it upon Lettuce, and whose side Withers, there is the Barrenness. But it may far better be known, by the cold temperature of the Woman, her strait Loins, defect of hair on her Pubes, and other Parts, and by the Whites. And hence perhaps it is, that this Disease is only cured now and then by Chance, for it need not be questioned, were the causes certainly known, but more might be cured of it.

§. 4. Causes.

§. 4. Causes.

BUT to say no more of these things, we will proceed to the *Ætiology*, and see what the *Ancients* reckoned to be the Cause of Barrenness. And among them the *Arabians* fly to occult Qualities.

The *Stoicks* lay the principal blame of sterility upon the disagreeable Powers and Qualities of the Bed-fellows.

Some have the Faculty of their Womb frustrated from their Conception. *Rivertus* has four Causes.

1. When the Reception of the Seed is hindered, either through the Smallness and Narrowness of the Genital Parts of Young or Old Women; which also is hindered, when Maids are Lame, and have their Thighs distorted; or are Flat in the Hips, so that in Coition they cannot well make a convenient Figure, for the due Reception of Seed. He adds excessive Fatness, which straitens the passages of the Womb. Among the Nonnatural things he reckons the Passions of the Mind, especially hatred conceived between the Married Parties, whereby the Woman being averse from this sort of pleasure, does not supply Spirits sufficient, wherewith the Genitals at the time of Congress should be Turgid, that the *Matrix* as it were overjoyed may meet the Man's Seed, and kindly entertain it, and draw it into its Cavity and also Irrigate it with her own Seed, poured out in that pleasure, that so (as he speaks) from the commixtion of them both a Conception may arise.

2. So also the *Ancients* say, Conception is hindered, when the Seed is not retained, either by reason of the excessive humidity of the Womb, or of external humors. Causes, as Bathing, Idleness, moist Diet, or of the Whites of a long continuance.

3. *Rivertus* his third Cause is when the Seed is corrupted in the Womb.

4. He assigns the fourth Cause of Barrenness, when a Woman affords not matter sufficient for the Conformation and encrease of the Embryo, through defect of Seed or of Menstruous Blood; so such as are either too young or too Old, conceive not, for want of both Matters.

§. 5.

Hermetismont acknowledges neither Heat, nor Cold; nor Moisture, nor defect of the Menstrua nor any thing else for the true Cause of Sterility. For he says "I see only one Cause Adequate and Co-ævous to a positive Entity which is called Barrenness, described by the Scriptures in these Words *GOD opened Sarah's Womb*. For "it is the gift of God, conferred on Nature, whereby the Perfection of the Womb, well closed with its Folds, is opened and dilated at the congruous Moment of Congress. There is (says he, "a Magnetick drawing Blas, by which for fear of a Vacuum an Attraction of Seeds and an Adequate Repletion of the dilated Folds follows that Apertion. That is "the foresaid Apertion Sucks for fear of a Vacuum; which, if it be done in an undue Moment,

in Vain. For the Womb of a
 is scarce two Inches wide,
 if it is folded into it self in
 little Folds. But the opening
 consists not in Man's will,
 Titillation, or Luxury, but
 in the Divine good
 nature, wherefore there are some
 dispersed in Nature of Open-
 and Shutting; so that some
 have obtained this Facul-
 Nor is it sufficient that the
 Womb open at the stated Mo-
 unt, unless the arriving Guest
 be grateful to the place. For if
 be touched with any Taint, all
 of Generating with that
 will be in Vain, because the
 Womb, conceives a rage
 Abhorrence, scarce to be re-
 moved.

§. 6.

With other Authors,
 will now examine the
 of Barrenness through the
 fault; as for the Man's, we shall
 find that, in another place.
 therefore are Barren, either
 they are Imperforate, or
 the *Vagina* is too strait, to ad-
 mit of a Man. Some again can admit
 of it; but either the Seed, or the
 cannot reach the Ovary,
 sometimes through the Falling-
 of the Womb, or the Cervical
 of the Womb being Swell-
 in such as whose inner Orifice
 of the Womb is distorted, closed
 or any way straitened, or be-
 of Tumors, Exulcerations,
 &c. or because the *tube*
Fallopiana are obstructed: and
 the passages from the Womb
 the *tube Fallopiana*, are ei-

ther obstructed, closed up, or com-
 pressed.

Some are Barren because their
 Eggs are either Intemperate, ob-
 structed, hardened or wrapt in an
 over hard Membrane, so that they
 cannot ferment by contact of the
 Man's Seed. Others, because their
 Eggs are little or juiceless, and have
 nothing in them. Others, because
 they are Intemperate in their whole
 Body, either Cacochymick, or over
 Fat, or they have their *Menses* too
 much, or the Whites; but gene-
 rally the Cause of Barrenness lies in
 the obstruction of the *tube Fallo-*
piana. So we opened a Barren
 Woman, whose Tubes were Cal-
 lous; and another had Stones in her
 Tubes. For if they be obstructed,
 the seminal Air cannot reach the
 Ovary, so as to Fecundate them.
 And it is apparent, that the obstru-
 ction of these Tubes may happen
 divers ways, either by viscid Phlegm,
 or an Austere Acid, a *Callus*, or
 Stone: these passages are stoppt also
 by too much Fat, which Fat like-
 wise by its oleosity hinders the re-
 fluent Liquors from fermenting:
 whence it is, that over Fat Women
 do not easily Conceive. There may
 also be an abhorrence in the Plastick
 Spirit. And Conception may be
 hindered by an Ill Constitution and
 too great Laxity of the Pores.

To these may be added external
 Causes, to wit any intemperate
 Air, or one too thick, cloudy,
 stinking and impure. And Watry,
 Acid, Austere, Glutinous and Gross
 Diet, and sometimes Spirituous, Hot,
 Aromatick and Melanagogick Me-
 dicines used immoderately; the
 abuse of Incrassating and Moistning
 Medicines, Baths, &c. Watching,
 excessive and unseasonable Sleep,
 ove

over much exercise of Body or Mind, an Idle and Sedentary Life, Passions of the Mind, and especially hatred. Excretions either suppressed or excessive, and especially a *Diarrhæa*, excessive *Menses*, Whites, too much Sweating, Vomiting and the like. Finally misfortune by Abortion, difficult Travail, a Wound, Ulcer, Swelling of the Glands, stone in the Bladder, Blow, Fall, Contusion, Compression, &c. or from Causes or Diseases both of the Womb it self and the adjoining Parts. As for what Authors talk of the Stars and Enchantments, I have ever been dubious in the Case.

§. 7. Prognostick.

AS to the Prognostick; this Disease is not dangerous, and oftentimes not very prejudicial to health. It is Chronical and often incurable, chiefly that which arises from a Coalition of Various parts of the Womb, especially from a total obstruction of the *Fallopian* ducts by a *Callus*, Stone, &c. or by grievous Diseases of the Womb, an *Atheroma* *steatoma*, *Scirrhus*, Cancer, Gangrene, tedious Whites, &c. Likewise, if there be a carnous Excrescence in the *tuba Fallopiana*, or if there be an excessive Copulency, and if it be Connate.

§. 8. Dietetick Cure.

PART of the Cure consists in Diet, or the six Non-naturals. The first of them by the general consent of Physicians is the *Air*. It must be temperate: Cold

and Winter Air must be avoided. The change of Air has made many Women Barren; I could give instance; but for some reason shall forbear. The Food must be of good Juice, we reject all that is Crude, Windy, Viscid, Acid, and over Aromatick. Drinking Cold Water is hurtful, and an excess in which has made several Women Barren, as daily experience alas! does testify. We disapprove of Guzzling too much Coffee or Tea. Motion must be moderate, to much must be avoided: for the reason why the *Scythian* Women are often Barren, is their too much riding. And therefore *Aristotle* writes, that through bearing too great burthen and over toying, the *Barbarian* Women are apt to be Barren. Upon this account, we blame Jumping, Shouting, Bawling, Coughing, and frequent Sneezing. Nor must we exclude Passions of the Mind, wit, Anger, Sadness, Fear, Hatred, Joy, Love. Sleep must not exceed bounds, nor must it be unseasonable: So over much watching may do harm, inasmuch as it greatly suppresses the animal Spirits, which ought to contribute much to Conception. In this case especially *excreta* and *retenta* must be agreeable to Nature: For the *Menses* either suppressed or exceeding; the Whites, do harm. Excess of *Venus* is hurtful; therefore see, Whores are generally Barren because the Vessels, are too lax, that an Egg cannot stick to the Womb.

9. Phar
Cure.

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Pharmaceutick
Cure.

Now we are happily fallen upon the Pharmaceutick Cure. We will first see the Galenical, indeed that of *Riverius* who owing to the diversity of the humors insists upon a diverse Cure. Therefore which has its rise from Fatness, must, according to the nature of the humor, be cured by an extenuating and convenient Evacuations. Barrenness proceed from an ill use of Diet, as in Gluttonous, and Water-drinking Women, he advises such to a strict rule of living. He says, the robust Virgins must be effeminated, by abstaining from Meats of a gross Juice, Labour and Exercise, and the present Flux of the *Menstrua* be procured by repeated Purging and Venesection.

If it proceed from a closure of the Womb, Distortion, Obstruction, Tumor, or Ulcer; care must be taken of them by proper Remedies. So an over Hot and Constitution, must be corrected by Coolers and Moistners; and an over cold one by Heaters. For *Riverius* says, That a cold and moist temperature is the most frequent Cause of Barrenness: therefore in the first of all he orders the viscid Humors to be evacuated by Purgatives, Diureticks and Sudorifics. For Revulsion's sake he orders Cauteries to the Arms and Thighs. Then he will have the principal Parts strengthened with Treacle, Mithridate, *tabell. arom. rosat.* *Alkermes*, &c. Afterwards he has recourse to such things

as have a Specifick property to strengthen the Womb, help Conception, and provoke Venery, Receipts whereof you may see in *Riverius*.

§. 10.

IN our Opinion the Indication in Barrenness may be manifold, and now and then contrary; and so divers Remedies may be serviceable to Women: Which makes me the more to wonder at the Ignorance and Stupidity of those Men; that think they can by one and the same Medicine, Cure all Barren Women; and boast of I know not what Specificks. But we, according to reason, do judge, That a different Cure should be insisted on, as the Causes differ; and Specificks may be used in all.

Barrenness therefore, that proceeds from a Woman's incapacity to admit a Man, is cured by removing the Impediments. That which proceeds from an *Acido-Austere*, contracting the *Fallopian* ducts and other Vessels, and sometimes putting their Fibres into Convulsions, and so disquieting the plastick Spirit, is cured by things that correct an Acid, and an Austere, such as are volatil Aromatics; also divers Absorbents, *Cinnabarines*, &c. Which end the following Powder answers, half a Drachm of it being often given;

Take of native *Cinnabar* half a Drachm, shavings of *Ivory* two Drachms, *Woman's Secundine* dried one Drachm. Salt of *Satyrion* half a Drachm. Mix and give it.

But if the *Fallopian* duct be stoppt by tough Phlegm or some Tartareous matter, so that the Man's Seed cannot Influence the *Ovarium*, in that Case divers Preparers will be proper, as Inciders, Attenuants, and Purgers. Among Preparers and Inciders, this following, or some such Physick Wine, will be proper;

Take of leaves of Rosemary, Baum, Sage, Mercury each one handful, root of Eryngo two Ounces, *Cassia lignea*, large Cloves each three Drachms, Seed of *Ammi*, Sermountain each half an Ounce, shavings of Ivory two Drachms. Put them in a Bag.

So a Decoction of Rosemary in Wine, for the ordinary Drink will be good, essence of Sassafras Wood, *Satyrus Crollii*, and Amber, made with Spirit of Baum, are generous Remedies in this Case.

All volatil Salts are good, inasmuch as they open the obstructed passages. *Hartman* commends Salt of *Satyrum*, if half a Scruple of it be given often in Sack or *aqua vite*. *Mulierum*. So *Platerus* gives Oyl of Majoran, and Musk each one Grain, with Hare's runnet in some convenient Vehicle. Indian Chocolate well aromatized, and taken every Day in Milk, has an excellent faculty, in exciting the Spirits of the Womb, and also of opening the passages.

These Preparers and Inciders premised, you must evacuate this Viscid Phlegm out of the Body, by this following, or some such thing;

Take of leaves of Mercury, Rosemary each half an handful, car-

duus benedictus two Pugils, of Eryngo one Ounce, Flowers of Rosemary, Sage each half a Pugil, root of *Meboacan* one Ounce, white Agarick half an Ounce, seed of *Carthamus* one Ounce, *Ammi*, Sermountain each one Drachm, large Cloves, *Cassia lignea*, the whitest Cream Tartar two Drachms. Mix them. Make a Bag. Or;

Take of Conserve of Rosemary Flowers, Sage each half an Ounce, Resin of Jalap three Grains, *vis catholicus purgans* one Scruple. Mix them. With Syrup of Cinnamon. Make a bolus.

Pills also and Potions may be given if you please.

But if the Ail proceed from Pollution or a Philtre, then we advise Vomits. Thus a Noble Woman vomited up three Worms, and became Fruitful.

If the Disease arise from too much Seed, then extinguishers of Seed are proper, such as *agnus castus*, Wormwood, Camphore, &c. But if it proceed from some fault in the cervical Glands, then such things as we mentioned in the Whites, will move it.

If the teguments of the Eggs be too Thick, and cannot be reduced by the Influence of the Man's Seed, the foresaid Volatil Salts will be good, especially volatil Spirit of Sal Ammoniack Anthosate, and divers Fumes, Infusions, Pills, &c.

If it proceed from too much Copulency, then beside a spare Diet a Decoction of the Woods and their Essence, and sharp things may be used a long time. Here also pills

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 from Paucity of Liquor con-
 in the Eggs, all things that
 Seed are proper, especially
 boyled in Milk, and the
 Electuary;

of the. Conserve of Flowers of
 Rosemary each one Ounce,
 Eryngo root, Candied
 each three Drachms,
 Chocolate of Sevil one Ounce
 an half, Powder of large
 Cloves, Seed of Sermountain each
 two Drachms, with Syrup of Cin-
 upon make an Electuary.

Also *Diacinnamum regium* is
 excellent Medicine, *Conditum*
Myrti, ambratum, and mos-
 am; also Panado made with
 Eggs, Mace and Sugar are
 good. And here the Parts of Sala-
 Animals are proper. There-
 the following Decoction is ac-
 a Specifick against Bar-

of leaves of Mercury, Flow-
 of Sage, Rosemary each one
 full, large Cloves, Nutmeg
 two Drachms the Womb
 Hare, of an Hind dried each
 j. Make a Decoction accord-
 to art.

of these and other things divers
 Quaries, Infusions, and other
 of Medicines may be made,
 are extant in Authors. *Ett-*
 highly commends prepara-
 of Vipers, his Words are these:
 there is therefore a true Balsam
 in Vipers, and in their Volatil
 which renews the oeconomy

“ of the whole Body, and the effecte
 “ Ferments of the Bowels; it stoutly
 “ preserves, and strenuously restores
 “ the vital Fermentation of the
 “ Blood. Hence it is that an elegant
 “ rejuvenescence usually follows the
 “ drinking of Viper Wine. *Heli-*
 “ *deus Padeanus in curat. p. 294.*
 “ says, That by eating broth of boyl-
 “ ed Vipers, a Woman forty years
 “ Old, who before was Barren, after
 “ her Leprosie was cured, became
 “ Fruitful. Just as Cocks and Hens
 “ do, that are fed with Vipers, as
 “ *Zwelfer Animal. class. 12. writes.*
 “ And they are so very Fruitful, that
 “ eating of them has the same effects,
 “ and is good for a foul Scab, the
 “ Pox, &c. and for Fruitfulness,
 “ Prolongation of Life, Cleanness
 “ of Body, and Cleanness of Eyes.

Simon Pauli, be the Cause what
 it will, recommends to Barren Wo-
 men, the use of the Powder of the
 Herb Speedwel, which he gives
 them in the distilled Water of the
 same Herb, and he cites several in-
 stances of honest Matrons, who were
 made Fruitful by it. *Patterus* also,
 Doctor in Physick and Chirurgery,
 and Chirurgeon to the Court of the
 most Serene Prince of *Hesse*, so-
 lemnly protested to me, that he has
 often seen the use of Medicines
 made of Speedwel experienced in
 Barrenness.

If Barrenness proceed from the
 Glands being too Lax, divers Astring-
 ents both Internal and External
 mixt with Specificks, will do
 good.

But if it proceed from the long
 continuance of the Whites; then
 first give an Uterine Clyster, and
 afterwards the following Powder of
Simon Pauli.

Take of leaves of Speedwel well Powdered, Seed of true *ammi* each half an Ounce, lesser Cardamom, choice Cinnamon each two Drachms, Sugar Candy a quarter Part of the whole Weight. When they are powdered, add to them a few Drops of Oyl of Cinnamon. The Dose is from half a Drachm to a Drachm.

So *theriaca caelestis* often used gives help; for by means of the volatil Salts the *Fallopian* duct is opened, whereby the Eggs in a Woman's Testicle, are fecundated and got out.

Among Externals a certain volatil Liquor made of mineral Spirits excels all, which may be used in one of our Instruments or *Glauber's*; or they that want them, may put it in a long necked Viol, the Mouth may be applied to the *Sinus Pudoris*, and the bottom may stand upon the Coals, and so the volatil Spirit may be received. By doing this not only the *tuba Fallopiana* is opened, but the Eggs that are too thick skinned, are made thinner and tenderer, so that they may be the better fecundated by the Seed, and the plastick Spirit appeased. Divers artificial Baths are good, especially one made with Ants. Natural Baths also are good, whether Sulphureous, Bituminous, Aluminous, or Nitrous.

We commend also *Inseffus* made of Aromatick Herbs and Roots, and of Minerals. After a Bath or an *Inseffus*, a Fume may be made of Gum *anima*, *tacamahaca*, Amber, *Benjoin*, &c. for instance;

Take of Gum juniper one Drachm Berries of Juniper two Drachms Frankincense, Mastich, Gum *ma* each half a Drachm. them.

Or after Bathing an Infusion of some Liquor may be made by Syringe. Or the aforesaid way may be used. Divers Pessaries are proper, especially such as are made of Volatils. Garlick with Oyl of Spike administred in form of Pessary, is commended. Uterine Clysters likewise will be good for instance, that of *Simon Pauli*;

Take of root of both the *Aristolochia* each two Drachms, *Gentian*, *Zedoary* each one Drachm leaves of ground Ivy, lesser Cardamom, *Aristolochia*, *Rosmarinus* each one handful, *Baun*, *Mugwort* each half an handful lesser Cardamom half an Ounce Cut them, bruise them, and beat them for an Uterine Clyster.

Or this, or the like Liniment may be made to Anoint the Belly from the *Pecten* to the Navil;

Take of Saffron, Spike, *Mastic*, *Styrax* each three Drachms, *Lignum* one Drachm, Wax one Ounce, Oyl of Spike and Rose each what is sufficient. them.

We refer these following to the empirical Class.

Julius Caesar Baricellus advices for Barrenness, that the Man and Woman, every Day Fastings, should eat in the Broth of an old Cock, *Poulet*

der of the Stones of a Boar, or a
dried in the Shade.

old *Grembs* says, it is an ex-
pedient for Fecundity, if
Man and Woman Anoint them-
selves with Oyl of Ants.

Philippus Grulingius says, this
is a most certain Remedy
and will help Conception;

of the Testicles of a Ram pre-
pared in Wine, and dried, the
Womb of an Hare prepared,
Cloves, Seed of true *Ammi*
each two Drachms, Saffron one
Drachm and an half, Pith of
Mazet, Fistick Nuts each six

Drachms. Bruise them. Boyl
them in a Quart of Sack to a
third. Take two Ounces after
Meal, for three Days, on the
fourth let the Woman lie with
her Husband, and she will Con-
ceive.

Dominicus Leo commends the
frequent use of Peony Seeds. and
Filings of Ivory Drunk in red Wine
by a Barren Woman.

Some also account *Hippocrates*
his Pessary as an *arcanum* to streng-
then the Womb. It is made of
Powder of the Loadstone with Wo-
man's Milk.

Qqq 3

CHAP.

C H A P. VI.

Of Symptoms of Women with Child, that is, Nauseousness, Vomiting, Longing, Spasm, false Conception, Miscarriage, and Mola.

§. I.

FROM what was said before one may gather, that Man is made in, and of an Egg: for the bud is in these Vesicles, out of which humane Bodies sprout, to wit, when, upon the approach of the seminal Air of the Man, this bud is disposed to sprout, which disposition of the Egg is called Fecundation or Conception. For when the Man's Seed is ejaculated into the Womb, yea often into the very Ovary, the seminal Air exhales, gets into the Testicles, penetrates the Eggs that stick there, and is diffused through the whole substance. And if there happen to be but one of all the Eggs, in whose bud a Liquor is found disposed to ferment with the seminal Air, immediately that Effervescence commences, which must last all the Life long of the Body to be produced; and then a Woman is said to have Conceived, and an Egg to be fecundated. The Egg thus fecundated glides through the Fallopian ducts into the Cavity of the Womb, and then the quantity

of the humor encreases; so that form of a bubble it indefinitely receives increase. Hence almost all Anatomists have observed the Rudiments of a *Fœtus* to be a Bubble. And what disturbances are raised about this act, the Symptoms of Women with Child do testify. For in the first days of Conception they are loathing their Meat, Nauseousness, and Reaching to Vomit, Strangury, Longing, Gripes, Loosness, Toothach, Vertigo, Headach, Cramps, sometimes the Sciatica, often a false Conception and Abortion. About the middle of the time, the Poor big Bellied Women are afflicted with a Cough, Palpitation of the Heart, Swooning, Pain in the Loins and Hips, Bleeding at the Nose, Hæmorrhage of the Womb &c. In the latter end of their time they are troubled with stoppage of Urine, Strangury, Costiveness, breaking of their Bellies, and often instead of a Child they have a Mola. The chief of these Symptoms, and such as happen most frequently, we shall briefly examine as to their Causes and Cure.

2. Definition of Vomiting.

Vomiting of Women with Child may be described to Excretion of the Contents in Women with Child, arising from excessive motion of the Stomach, while the animal Spirits, irritated by things bred or moved in Conception, endeavour to excrete what is troublesome by it.

Difference.

Some indeed are only troubled with a Nauseousness, according to the disposition of the stomach, and aptitude or ineptitude of the matter to be voided. Some are troubled in the Morning, others in the Evening, some after Meal, some cast up all their Meat, others but a little viscid matter; some that they have done Vomiting are better, others worse; some are ill at every Moment of their Conception, others not till several days after, sometimes Weeks, and sometimes Months or two, some begin to vomit in the beginning or middle of their time, others are troubled with it all the time they are with Child. But this happens according to the different Nature of the humors, the seminal Air, the disposition of the Eggs, Conception, and time of Impregnation. Some Women with Child cast up Meat or chyle or cholerick Matter, or Phlegmatick Matter, and not pure Blood, as we read in *Ephemerid. obs. 6.* a Case of a Woman, who from the first of her being with Child, to the last, every day vomited Blood,

so netimes florid, sometimes a little coagulated, about eight Ounces, without damage or any considerable harm, being otherwise in perfect Health.

§. 3. Description of Longing.

A Pica, Malacia, or Longing, is an Appetite of things Impossible or Absurd, depending upon a peculiar Influx of the animal Spirits, and Regiment of the Plattick Spirit.

§. 4. Description of Miscarriage.

Miscarriage is one of the greatest and most frequent Mischiefes, that attend Women with Child, wherein Women are afflicted grievously, yea much more grievously than in a natural Birth. *Andreas Smitzius* gives this as a reason, Because unripe Apples cannot be pluckt without Violence. There are some of these poor Wretches, that, as *Heferus* in his *Hercules medicus* says, do protest they had rather bear ten Children, than Miscarry once. There are some that Miscarry as they walk, without going to Bed. I have known several such. An Abortion therefore or Miscarriage may be described to be, a *preternatural and unseasonable exclusion of a Child, not then perfected, or of a shapeless Mole, with great Pain and Anxiety before the seventh Month, be it born alive or dead, arising from Causes which shall be hereafter mentioned.*

§. 5. Description of a Mole.

A Mole, or a false Conception, is, a *shapeless, inanimate, and conglobated Lump, without Bones, or Bowels, hard and covered with a Pellicle, red and bloody on the inside, on the outside of a whitish red, of an Oblong round Figure, about as big as a Hen or Goose's Egg, Conceived in the Womb, resembling a Fœtus.*

Difference of a Mole.

They commonly make a Mole to be three fold: The lesser, and that about as big as a Hen's Egg, they call a *Sun Calf*, which comes away generally about the third Month. The second they call a *Moon calf*. And a Woman goes with a third a whole year yea, sometimes all her Life time, as the writings of Physicians do testify.

The Descriptions of the rest of the Symptoms may be had before in their proper Chapters. Wherefore we will now consider the Part affected.

§. 6. Part affected.

AS for Vomiting in Women with Child, the Part affected, is, by the Universal agreement of Physicians, reckoned to be the Stomach; but how that is affected, is yet disputable amongst them. However it is beyond dispute, that Vomiting is caused by Conception, whether it be by Communication of the Coats or Nerves of the Stomach,

with the Nerves of the Womb by a Heterogeneous Ferment, communicated to the Stomach by Womb.

There are some, that lay fault upon the Spirits being obscured about the Formation in Womb, deserting the Stomach and the business of the first Digestion, being thereby deprived of vital Character, whereupon Cruel humors are bred and provoke Stomach. Some say it is caused the stoppage of Impure and Corrupt Menstruous Blood. For certain, that in a Conception only the Blood and Spirits, in regard of their Particles, are much altered by the Conjunction of Spirituous genital Liquor, with Woman's Egg, or Vesicle; and the particular Effervescence, Temperature, and otherwise customary Evacuation of the Heterogeneous Particles in the Blood, if there any, do cease. So the Part affected in Longing is the Brain: And Womb is reckoned the Subject of an Abortion and Mole.

§. 7. Diagnostick.

HAVING done with these things, we will fall upon the Diagnostick, which we reckon may be taken from the Patient's Relation, not neglecting the concomitant Symptoms of this Disease. Since Patients do not well know whether they be with Child or no, it will be the Part of a Prudent Physician to discern, whether Vomiting proceed from gravidity or from some other Cause. In these things the Books of Practitioners are plentiful; but in our Opinion, at the very first a Physician

to tell whether Vomiting proceeds from being with Child or no. Sometimes Vomiting accompanies false Conceptions. Moles, Animals in the Womb, and the like often deceives, under a notion of Impregnation. Tumors, Colic and Wind do often ex- tend the Belly. Concerning which you may find many remarkable observations in *Epistemerid. Germ.* 1. obs. 1. and in other years.

§. 8.

THE Signs of Longing are, when Women with Child desire absurd things, such as are otherwise abhorrent from Nature, such as Flesh, and Fish, Eels, Frogs, &c. an instance whereof I knew of Tar, Sulphur, Coals, and a thousand other things. So a Woman bit out a piece of her Husbands Arm. And *Tulpius obs. med. l. 2. c. 24.* an instance of a Woman that ate four hundred Herrings. I knew one that eat Filings of Steel, and another that longed for Lead.

The Signs of an actual Abortion manifest it. It may happen from the first moment of Conception, till the beginning of the seventh Month. It often happens about the end of the eighth Month; but it falls out sometimes both before and after that time. Before the tenth week after Conception Exclusions are scarce to be named Miscarriages, because then there are any Rudiments of a *Fœtus* appearing nor any beginnings of a *Placenta*. Wherefore then it may rather be accounted a *Mola*; for unless the *Fœtus* appear in the Body of the *Uterus*, it cannot be allowed to be a true Conception, and therefore cannot be a Miscarriage. Now

the Signs of an imminent Abortion, are various, and often incertain, because it comes upon Women unexpected, and on the sudden. But you may probably know it, by the foregoing Causes already mentioned, which are able to produce a Miscarriage, also by sudden shivering and shaking, attended with a little Heat, by Nauseousness, loss of Appetite, great Thirst, Pain of the side, Loins, Lassitude of the whole Body, Fainting, Palpitation of the Heart, stinking Breath, Fright, Grief, and such things. By a dull Pain in the Womb above the *Pubes*, less desire to Venerary, Cold of the genital Parts, &c. It is also evident by the *Excreta*, as if a Woman with Child have her *Menstrua*, or an encrease of the Whites; if the colour of the Body change, especially the Face. There are some who only by the colour of the Face will foretel an Abortion. Besides, there are some particular Signs, as the Detumescence of the Breasts, or abundance of Milk running from them. To which you may add, a frequent custom of Miscarriage: for many that are used to it, Miscarry upon any slight occasion.

§. 9.

ALL the Signs of a true Conception, happen in the Conception of a Mole, the *Menses* cease, the Appetite is depraved, there are Nauseousness and Vomiting, the Breasts Swell, and about the fourth Month, there is some Commotion of the Womb, like quickening, which endeavours to eject the Mole. And if it be not ejected, the Belly Swells, and other Symptoms arise.

§. 10. *Differe-*

§. 10. *Difference.*

BUT it is distinguished from a true Conception, in that, in a Mole no Milk can be squeezed, out of the swelling Breasts, as it may in a true Conception. In a Mole also there is no lively Motion felt, as from a Child, but it rowls only from one side to another like a Stone, with much trouble. It is distinguished from a Dropsie in hardness. In a Mole indeed the Belly Swells, but the Arms and Legs are Lean. Besides, it is the property of a Mole, that by the pressing of the hand, it may be thrust from one side to the other, which cannot be in a true Conception. Lastly a Woman, that goes with a Mole, perceives a violent Commotion in her Belly, before the third Month; but in going with Child, rarely before the fourth.

We have already treated sufficiently of the Signs, Causes and Way of Cure of the rest of the Symptoms in the Cure of Diseases of the Head, Stomach, &c.

§. 11. *Cause of Nauseousness and Vomiting.*

THese things premised, we will enquire into the Causes of the Symptoms in Women with Child. The Galenists say, that Vomiting arises from the stoppage of the Menstruous Blood, which corrupts, sends out Fumes, and so irritates the Stomach.

Sylvius says, That the whole time of going with Child, the Womb is so contracted and cor-

rugated, that the Blood standing in its Vessels and Caverns, is repelled upwards towards the rest of the Mass, that this Blood is altered in the Womb, from the alteration whereof several bad humors arise. But, according to him, the Blood together with the Pancreatick Juice exerts its Malice, and proves the Cause of Nauseousness and Vomiting, and also of Loathing and Longing.

For such Women, as have Fluid, moveable and sharp Bile they are not only troubled with Nauseousness, but with Vomiting also.

But such as have an Auster Pancreatick Juice, they are more troubled with Nauseousness than Vomiting. And he ascribes the Cause to Exhalations raised in the *Dundenum*, which are carried to the Stomach, and irritate and tickle it, and sometimes corrode it. He also derives the rest of the Symptoms, as Swooning, *Vertigoes*, Lifflesness of Body, divers Fevers, Leanness, Cachexy, shortness of Breath, from the vitiated Effluence of the Bile and Pancreatick juice, by reason whereof, he says Exhalations arise to the Stomach and there cause Fits both Slight and Violent, and other Symptoms.

§. 12.

WE reckon the Immutation of Blood and Spirits by Conception is the Cause, why Vomiting and Nauseousness come upon big-bellied Women. For it is very evident, that the Spirits of our Body can by unanimous consent affect one another. So the plastick Spirits quartering in great

about the Womb, by reason
may easily irradiate the
and do often spasmodical-
Nauseousness, Loath-
Fainting, Weariness, and o-
Symptoms, familiar to Wo-
with Child may also be dedu-
from the disorder of these Spi-
And so the new bud, Sprout-
in the Womb, may easily
the Membranes common
Womb with the Stomach,
spasmodically affect them,
often proceed, Nauseous-
Vomiting, &c. as one may
Vomiting, arising from the
in the Kidneys. Many crude
allo (which breed through
retention of the Menstruous
may be communicated by
Blood, Serum and other Hu-
to the Stomach, which irri-
the Fibres thereof, and so are
Causes of many mischiefs, es-
pecially of Nauseousness and Vo-
And a depraved disposition
Blood may contribute its share
thereby; therefore they that have
rachimick and foul Body, are
prone to these Symptoms. And
tenderness of years, because
Bodies are not sufficient for
tion. A sedentary Life con-
tributes much: wherefore this Di-
is not so familiar to Country
Laborious Women.
 unnatural things likewise, do
promote this Disease, through
inflammation, Solution of Uni-
&c. So any *Viscus* not doing
its duty, and corrupting its pro-
Aliment and Ferment, may
emit such hostile Particles
the Stomach. And sometimes
Diseases of the Husbands, espe-
cially such as are Subject to Vomit-
may contribute something,

since that may very well be done,
by Communication of spirituous
Particles in the Seed.

What Causes may be assigned
from Non-natural things, we shall
give you, when we treat of Diet.

§. 13. Cause of Long- ing.

I Question not but Longing may
be Caused by an Acid, commu-
nicated by the Mass of Blood, or
other humors to the Stomach: and I
have observed it in several Women
who have not been with Child. This
Foreign Acid Ferment, therefore
by affecting the Nerves of the Sto-
mach, occasions an unusual Appetite
therein, namely of things that are
not Aliment, such as Stones, Chalk,
Corn, Earth, Lime, &c. because
by taking of these things the Acid is
saturated.

Now the reason why Women
with Child are troubled with this
Disease, is, because the Fermenta-
tions of the Blood are much altered
by the Spirit of the Man's Seed, and
a Foreign Acid Ferment is com-
municated to the Stomach: And
so it happens, that these Fermenta-
tions do much alter the Thoughts
and Appetite. But there is one rea-
son especially, because Women
(who at all times do more follow
their inclinations than Men, and
whose Souls do not curb such
thoughts) think, that when they
are with Child they may do any
thing. I find even my self, that
I have a strong desire to some one
sort of Meat, and this can proceed
from nothing else, but that some
peculiar Ferment does in some cer-
tain manner affect the Nerves, so
tha

that such a Meat is represented to the Soul. Most certain it is, that some peculiar motion is made in the Nerves of the Sixth Pair, which is the Cause of Perception and Depravation of judgment.

§. 14. *Cause of Abortion.*

ABortion, according to the *Galenists*, arises either from excess of Blood, and a too great Afflux of it then to the Womb, or from defect of it in the Mother to nourish the Child, and from other remote Causes, which shall be hereafter mentioned.

§. 15.

Sylvius says, the Cause of Abortion is either a *Plethora*, by reason whereof the *Fetus*, sticking but loosely to the Womb, is often expelled, when abundance of Blood seeks an Outlet, and finding it in the Womb, that cannot bear its Violence. He doubts not likewise, but Abortion may happen from want of Blood. Among external Causes he blames, too violent motion of the Body, especially Dancing, Riding, reaching out of the Arms, because by the motion the Child in the Womb is shaken, whose Bands (that is, the *Placenta* sticking to the Womb) if they be loose, are presently unfastened, and broken, parting from the Womb, the Child and Secundine forcing a way out. He also proves both by reason and experience, that Abortion is often caused by the Mothers falling. So dayly experience shows, that it is caused by a great Fright,

from care of Mind, sadness and from Anger: For in all the Soul is strangely disturbed, all the Actions both Animal and tural are much hurt, whereupon less but a far greater Perturbation all the Functions in the *Fetus* follow, which among several things may occasion an Abortion. He also blames excessive Watching inasmuch as it wastes the strength and so the Child by degrees wastes and he finds fault with excessive heat of the Air, a violent Loose bloody Flux, and any notorious loss of Blood.

So, according to him, heterogeneous remedies may occasion Abortion, if either Imprudently or maliciously they be given, during gravidity: Such are plentiful Vnesection, especially in the Food violent Purgers taken in great quantity, and especially sharp ones.

Thus likewise the excessive use of Spiritous things, inasmuch as they dissolve the whole Blood, and facilitate the Flux of it by the Womb may easily cause Abortion; also the bad internal conformation of the Mothers *Abdomen* is apt to cause Abortion. He refers likewise Mole, or a Living and a Dead Child being together in the Womb, the one forcing the miscarriage of the other.

§. 16.

We do judge the Cause of Abortion lie both in the Mother and the Child. In her as she is miserably afflicted by the Non-naturals, and the Preternaturals acting in a various manner. In the Child, inasmuch as it either of it self, or by accident suffers from

matation, and through a bad
 natural disposition endea-
 its exit. So the Proximate
 sometimes in the Womb,
 in some way or other, either
 Plethora, by other inconveni-
 ences, or by an excessive influx
 of animal Spirits, is irritated, and
 sometimes spasmodically contract-
 ed, so that the exclusion of what is con-
 tained in it: for as in Vomiting the
 Stomach is offended, so in Abortion
 the Womb to the Exclusion of the

any grievous Disease of the
 Mother, whensoever it arises, may
 cause Abortion, inasmuch as the
 Fetus may then easily be excluded
 from the Mother who is well. So it
 happens, when the mothers
 Constitution is not rightly constituted,
 either too tough or hard, not enduring
 a convenient Distension, that the
 Fetus is excluded. To these may
 be added a bad Conformation of the
 Womb, if the carnosus Substance
 is either too thick, or callous, if
 the Capacity of the Womb be too
 small, so that it cannot sufficiently
 distend, or if there be too great
 a Quantity in the Womb; all these
 may cause Abortion.

There are other Causes also of A-
 bortion, when the Mother has lost her
 Strength by a Disease either present
 or past, to wit, a Fever, Dropsie,
 Plethora of the Womb, Erysipelas,
 Inflammation, Abscess or Cancer,
 &c. upon I question not but the
 Fetus by consent is strangely dis-
 tressed.

Heaving, Coughing, Vomiting,
 &c. when they are frequent,
 violent also, endanger Abortion,
 inasmuch as the strength both of the
 Mother and Child is wasted thereby,
 and the Muscles of the Abdomen

being strained do press upon the
 Womb, and so do often force an
 Exclusion of the Fetus, though
 Immature.

And so a Mole, sticking faster to
 the Womb than the Child, with its
 weight presses downwards, and some-
 times forces away the true Child.

To the Procatactick Causes,
 which much afflict the Mother, and
 by consequent likewise afflict the
 tender Fetus, we refer those things,
 that Physicians call the Non-na-
 turals.

And in the first place the Air,
 which if its heat be too violent either
 by the Sun, Fire, Bath, or Stove,
 the Womb may thereby be stimu-
 lated to the excretion of the con-
 ceived Fetus.

The abuse also of Spices and Spi-
 rituous things, and of Menagogue
 Medicines, is very prejudicial, all
 which things contain in them volatil
 Salts, which may easily put the
 Blood in fusion, and disturb the
 animal Spirits, and so are apt to
 cause Miscarriage. In this case Strong
 and Inebriating Drink is to be con-
 demned. Wherefore the Angel,
Judg. cap. 13. says to Manoah's
 Wife, who bore Sampson, *Behold
 now, thou art Barren, and bearest
 not: But thou shalt conceive and
 bear a Son. Now therefore beware,
 I pray thee, and drink not Wine,
 nor strong Drink, and eat not any
 Unclean thing.* But let Women
 especially forbear Spirit of Wine;
 for many sad examples show, that
 this has caused Abortion. Some-
 times fasting also has occasioned it,
 and excess in Meat and Drink.
 And so has the desire of Meat, which
 could not be procured.

Violent Motion also, as Dancing,
 Riding, either on Horseback or in a
 Coach,

Coach, or any violent jogging of the Body, lifting heavy burthens, a bruise of the Belly, as I had an instance not long since, may easily occasion Abortion, inasimuch as the bands of the *Fætus* in the *placenta* are made loose, and the tender *Fætus* is shaken in the Womb, so that the bands at length are forced to give way, and let go the Child. So all excess of Blood may occasion Abortion, while it flows more than needs to the Womb, presses the *Fætus*, and irritates the Fibres, so that afterwards the tender *Fætus* is forced away together with the Blood. A notorious Hemorrhage of any Parts, any excessive Flux of the *Menstrua*, and a Dyfentery or Loosness, are able to cause Miscarriage.

Too frequent *Vencry* is naught, inasimuch as it makes Lax the Neck of the Womb and other parts, and the Conception already made is abhorrent of it; so that hence Abortion does often proceed. And so the Vessels are made too Lax, by the Flux of the cervical Liguor.

The *Passions of the Mind* act their Parts too, inasimuch as they disturb the animal Spirits, put the Womb often into Convulsions, and so expel the conceived *Fætus*. Among these are Anger, Sadness, Frights at terrible Objects, and on a sudden, which often move the Child, and indanger the Mother. Any violent sound has the same effect, as of Guns and Thunder: So I knew a Woman at *Scomberg*, who in Summer time, if her Child were not seven Months gone, always Miscarried upon hearing Thunder. Any Strong or Sweet smell, as of Amber, Roses, Musk; or ingrateful, as of a Candle's Snuff,

Horns, Hoofs, &c. are apt to cause some Women to Miscarry. Women do ill also in Lacing and Binding themselves too strait, to keep their Bodies slender, and in shape. *Hieronymus Mercurialis* observes that several have made themselves Miscarry by the straitness of their Cloths. This straitness looses the Vessels, that it hinders the circulation of the Blood, and frequently occasions Obstructions, Tumors, Stitches, Abscesses, Ulcers, Consumption, shortness of Breath, &c. Let Women therefore have care how they pinch themselves, let them wear such Cloths, as may be least hurtful to themselves and their Child.

§. 17. Cause of a Mole.

THE Ancients material Cause of a Mole is the vitious Seed of both Parents, which they held into the Womb in the Act, and the greediness of the Womb is conceived and retained; and by the heat of the Womb hardened. In which matter, they say, the Menstruous Blood does flow by *Cotyledones*, and it is nourished and increased by that Blood.

§. 18.

Paracelsus says, That a Mole is an abortivum kind of Child in the Womb, generated in the Womb. Some place the Cause of this vitious and abortive Conception in an alteration of the Seed, and the deficient activity of the Male line especially.

§. 19.

say, the Cause of a Mole is the Coagulation of the Seed, or only of Blood and sharp liquor in the Womb, usually by an Acid.

Prognostick of Vomiting.

Vomiting in Women with Child is seldom dangerous, usually upon an empty Stomach, without any great disturbance, the Placental Spirits are careful of themselves, and only expel that which is already separated, and not the Nourishment of the Child. In the matter ejected what it is, is often a comfort both to the Woman and the Child. Hence *Rocheus de morb mulier.* that in the fourth Month longings, partly because the vitious humors are carried off by Vomiting, *Heferus in Hercule medico* 23. says, That such Women have very fair Children, because they are nourished with the matter of the humors separated by Vomiting. But it is dangerous, when it comes immediately after Dinner or Supper, carrying off all the Meat, that cannot turn to Nutriment for the Child, when it exceeds in quantity, restraining and Motion; for it, as any other violent Excretion, may produce Abortion. Yet it is a Woman, that is Mother of many Children, who for the first Months cannot eat one Mouthful, but is forced to sustain her self with drinkables, and often Vomits up too, and besides this Vo-

mitting, when she is with Child, she has a great sense of heat in her Throat and Stomach.

§. 21. Prognostick of Longing.

As to the Prognostick of Longing, there is no great danger in it, unless it should last long, which might encrease the Cause, or the Woman should give way to it unreasonably, and long for absurd things, which might occasion several Obstructions and Corruptions of the Humors. But sometimes if the Humor be carried in abundance into the Stomach, and be very sharp, it may cause Heart-burns, which may occasion Swooning, and sometimes, but very seldom Death. Women are usually rid of their Longing towards the fourth Month of their time. If it continue longer, it is observed to be dangerous. It is good, if they long for lowre things; bad, if they Long for absurd things.

§. 22. Prognostick of Abortion.

Abortion, though of it self it be troublesome enough, and weakens Women more than Labour, is often also the Cause of divers other Diseases, Barrenness, Inflammation, Ulcer, *Erysipelas* of the Womb, &c. especially if it happens at the latter end of their time, at which time, because the *Fœtus* is big, it is with difficulty excluded the Womb, as an unripe Apple, which cannot be pluckt without

without violence; and it occasions great Hæmorrhages, which are attended with Swooning, *deliria*, and Convulsions. Hence *Aretæus* testifies, that he never saw a Woman recover, who after Abortion fell into Convulsions. Miscarriage is more dangerous of ones first Child, than in one that is used to it. Women of a very tender Constitution are in greater danger than fat Women. Fevers, Palpitation of the Heart, Heart-burn, and other bad Symptoms, make the Case more dangerous.

§. 23. *Prognostick of a Mole.*

A Mole is Salutory, if the Womb throw it out as an useless Burthen, and prejudicial to its self. No Creature, except a Woman, conceives or bears a Mole, as *Aristotle* testifies.

§. 24. *Diet in Vomiting.*

NOW we proceed to the dietetick Cure, which consists in the right use of the six Non-naturals. In Big-bellied Women's Vomiting the *Air* especially must be temperate. In Vomiting immediately after dinner and Supper, it is best to eat a little and often in a day of something that is good, so that both the Mother and the Child may get some Nutriment. Peptick Powders are good with ones *Meat*. Let the Patient according to the Nature of the Cause, *drink* cold Water: for some are so averse from Wine, that they cannot endure to

hear of it, because they find a Burning in their Throat after it. Some, if there be an Acid, may allow Wine either Sack, or in which Gold, Steel, or red Flints have been quenched. allow of Meats easie of Digestion. Flesh of Birds, roasted rather than boyled, Pears, Quinces, &c. have known fat things do harm. How other things may be directed and the use of them managed, appear from what shall be said hereafter.

§. 25. *Diet in Longing.*

IN Longing the desired Food must sometimes be allowed. It can be done without danger to Life, the mind must be fortified with divers Reasons, and must be diverted from these and other improper things.

§. 26. *Diet in Miscarriage.*

IN a Miscarriage the *Air* must be temperate, and without Heat: If it be over hot, it must be amended by strewing cool things on the Floor, and by holding grateful Scents to the Nose. Any grateful Scent is hurtful. A *Meat* must be given, easie of digestion, the Bread must be Wheat dipt in Juice of Berberis, Pomegranate Wine, Quince &c. Forbear all salt, and Meats, for I have known too much use of Mustard occasion Miscarriage. Avoid Acids, over-moist and Aromaticks. Give

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26. *Cure* *ing.*

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Drunkennels, either with
or its Spirit. Sleep and
are good. The Mind must
and quiet. Anger and
are as bad as Death. We
the rest among the Cau-

the same things in a manner
be observed in a Mole.

26. Cure of Vomiting.

NOW we will proceed to the
Pharmaceutick Cure. In
Vomiting of Women with
the Galemits, and chiefly
commends Venesection.
these words. "And Expe-
has taught, that Vomiting,
which afflicts Women with Child
the first Months of their Time,
exasperated, by Purging and
much relieved by Bleeding, yea,
quite removed, if it be repeated
every Month till the Symptoms
cease. He also advises several
dricks, which we have already
mentioned in the Chapter of Vo-
miting, c. 1. l. 3.

§. 27.

AND so ~~axillis~~, when an
impure and rancid Blood, e-
and anon supplying new Stores
incongruous matter to the Sto-
mach, does cause an emetick Dispo-
sition, testifies, That Vomiting in
Women with Child is cured by fre-
quent bleeding. *Pharmaceut. ra-
tional. Sect. 2. cap. 3.* He breaths
not in the Foot, but in the
Hand. And he commends divers
dricks mentioned in the third

§. 28.

Salvius commends moderate au-
stere Medicines, such as Plantain,
Houfleeke, Myrtle, Knot-grass, Bi-
stort, Avens, red Roses, &c. crude A-
lum and all the *terre Sigillata*.
Among chymical things he com-
mends Spirit of Alum, Vitriol,
Spiritus Salis dulcis, &c. For
fixing a volatil Bile he uses subau-
stere and acid Medicines, but espe-
cially Sauces, to which end he e-
steems volatil oyley Salts, which
promote the Fermentation of the
Food in the Stomach.

But if vitious humours offend not
only in Quality, but in Quantity,
he says they must be diminished by
convenient Purgatives; but he
slights sharp Purges, and therefore
strong ones; and admits only of
Lenitives. He also commends O-
piats and Nareoticks in this Case,
as things that both temper the
Acrimony of the Humors, cor-
rect their vitious Effervescence,
and dull all Sense, and so stop
all excessive Vomiting sufficient-
ly. To this end he gives *Lau-
danum Opiatum*, Treacle, and
Requies Nicolai. And so he u-
ses divers Externals in Form of
Oyls, Plasters, Cataplasms, Pow-
ders, Bags, &c.

§. 29.

IN the Vomiting of Women with
Child, according to our Judg-
ment we ought to proceed cau-
tiously, lest we do more hurt than
good. This is *Platerus* his Cauti-
on, and must be carefully observed.
If Women with Child be troubled
with Vomiting, such Medicines
Rrr must

must be omitted as incommode them: for the vomiting that we now treat of, often requires no Cure; and so the Physician by doing nothing does well, when things that should be discharged are discharged by Nature, and Women find no Inconvenience from it: for there is no Loss of Strength, if they are better after it; especially in morning Vomit, which provident Nature procures for her own Conservation.

But the Vomiting that manifestly hurts the Body, weakens the Child and the Mother. That which is excessive and threatens Danger, lest it should cause Abortion, indicates its Removal, and sometimes Mitigation, which the Physician does by checking the Motion, by diminishing, tempering, altering, and enervating the irritating Causes; by strengthening the Plastick Virtue, and by quieting the Spirits. And when he would do this, he fetches his Remedies from the common triple Store-house.

In Chirurgery, the first that offers it self, is, Bleeding, which we do not allow to be administered, unless in the middle months, for fear of miscarriage, but instead of it we allow of cupping and scarifying. Issues, Leeches, and Blisters deserve Praise in this Case; and rubbing the Arms and Legs, after Meat especially. This Rubbing is commended by *Mercurialis de Morbis Mulier. l. 1. cap. 4.*

From Pharmacy Vomits are taken; but because they are vexations to Patients, they may be omitted; yet I gave of *Tartarum emeticum* one Grain, with Salt of Wormwood two Grains, and *Theriacæ Cælestis* one Grain, to my

own Wife, when she was three Months gone, with good Success. Gentle Purgers and Abstergers of the Ways may be subjoyned. But it is safer to proceed with Aborbents, especially if Heat be joyned with it, the Dose whereof the Quantity of the morbid Acid must determine, and the Quality or corrosive Acrimony, that vellecates the Fibres of the Stomach, as it is stronger or weaker.

Among appropriate Aborbents beside their general Use in imbibing a morbid Acid, there are some that have a specifick property, as *Hazell* Misletoe has an antiepileptick Virtue, *Ash Bark* a diuretick, *Winter Bark* an antiscorbutick, *Martian* Medicines a cachectick, *Jovian* and *Saturnine* an antihectick.

In this Case therefore these things are proper, *Crabs Eyes*, *Harts-horn*, coats of *Hens gizzards*, *Unicorn horn*, *terra Catechu*, *Nutmeg*, *Ivory*, *Martian* Medicines, *Bole Armenick*, adding *Oyl of Cinnamon*, *Mint*, &c. *Astringents* also are good, such as *Tormentil*, *Bittort*, and *Terra gillata*. And things which refresh the Spirits, such as *Castor* and all *Balsamicks*, especially *Terra Aura Terra Japonica* is an excellent Medicine in this Case with *Essence of Opium*. Here is a Receipt for Vomiting, where there is also Heat;

Take of *Crabs Eyes* prepared, each one Scruple, *Nutmeg* half a Scruple, *Harts-horn* prepared one Scruple, *Theriacæ cælestis* one Grain. Mix them. Make a Powder, and divide it into two equal parts.

if the Head following

of Species d
fix Drachms,
Drachms, bu
Drachm. Fossil
prepared,
each two S
Drachm,
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if the Heat great, these following are proper;

of *Species diacreta Minsich* fix Drachms, or of Chalk two Drachms, burnt Ivory one Drachm, Fossil Unicorn, Crabs prepared, red Coral prepared each two Scruples, Nutmeg one Drachm, with a sufficient quantity of Sugar make Tablets.

powder of Brick, Spirit of Mars, or of Vitriol of Mars are genuine Remedies;

of Cinnamon water made with Quinces, Mint each one ounce and an half, Spirit of Vitriol of Mars twenty five Drops, Maltich two Drachms, *Laudanum opiatum* one Grain, Syrup of Maltich or de *Agresta* fix Drachms. Make a Mixture to be taken by Spoonfuls.

the Vomiting be like to end in Miscarriage, you may mix these with other Medicines. Our *Herick Laudanum* given in form of Pills is an excellent Remedy for these Pills tarry long in the stomach, are grateful to it, and so their Virtues the better. All Balmicks are good, and Chocoballam of Peru, which are mentioned before in Vomiting, especially volatil Oily Salts joyned with Opiats, *Laudanum cydoniaca*, *Hoffmanni* and *Theriaca castorea* are good. Curran Wine taken by Spoonfuls often does the

working of ones Meat and humors are removed by the

same Medicines in a manner, here Balsamicks are more proper.

Externally Plasters, Unguents, Balsams, Cataplasms, and Bags may be applied both to the fore and back part of the Stomach, according to *Avicen's* advice.

If there be a Loathing of Meat, *Oleum Cratonis* will be good applied to the Pit of the Stomach. Here also *Emplastrum stomachale Cratonis cum tacamahaca*, de *crusta Panis*, de *Carama cum Balsamo Peruviano*, a Cataplasm of Leven, Oyntments of Oyl of Maltich, Nutmeg, Quinces, Wormwood, Orange Pill, and a thousand other things will be proper. *Lo-vyse Bourgeois de obstetric. l. 4. c. 30.* commends the applying of an Ivory Plate to the Stomach as a certain Experiment.

Among Empirical Medicines these following excel.

Johannes le Bon in therap. Puerper. p. 6. highly commends a Decoction of the larger Chamomil.

Herlicius de cura gravidar. orders in a hot Cause to put the Hands and Feet in cold water; and in a cold Cause in hot.

Camerarius commends Quince Wine.

Forestus commends the eating of Services.

Ludovicus Mercatus tom. 2. l. 3. c. 11. highly extols this following;

Take of Aniseeds, Citron Pill each one Drachm and an half, Powder of red Roses, red Coral, prepared Pearl, *Electuarium de Gemmis*, each one Scruple, Sugar what is sufficient. Make Tablets with Steel water.

He also commends Bole Armeric or *terra sigillata*, given with Sugar of Roses.

§. 30. *Cure of Longing.*

THE Catulæ bleed in Women's Longing; but sparingly. Then they give a gentle Purge, and divers Strengtheners of the Stomach, according to the Nature and Disposition of the Patients Body.

§. 31.

Splivus, when Women with Child long for a large Quantity of good Meat or Drink, is for allowing it them. But if they long for unusual things, and they will not be satisfied, they must be persuaded by Reason. He commends aromatick and spirituuous things, as they restore the animal Spirits. But above all he commends Tincture of Cinnamon, made with rectified Spirit of Wine: and for such as cannot bear the use of that, they may take Nutmeg or Cloves.

§. 32.

I Think Longing may be cured very well with Medicines that imbibe an Acid, that check the vicious Effervescence in the first Wayes, and that carry them off by *Epicrasis*. Therefore if Women long for Chalk, Lime, Sand, or such things, if they are not excessive, they may be indulged: for it does them more good than hurt. But if their longing for absurd

things last long, and they grow worse you may very well have Recourse to Precipitants, which given in due Dose do help longing Women by Saturating the Acid in the Stomach, that is of a peculiar Taste. For by these Imbibers alone I have cured a Longing and a great deal of Stomach withal. *Frid. Hoffmannus* highly commends Mysterium of Pearl. But they must not take too much of these Precipitants otherwise by avoiding one Mischief they fall into another, as loss of Appetite, shortness of Breath, Cachexies, slow Fevers, and innumerable other Evils. Therefore Men do ill in eating Chalk and other Precipitants, to make them long for Fair, because such things hinder the first Digestion and all that depend thereupon.

With the foresaid Caution the fore Specifick Absorbents are proper such as Chalk, burnt Harts horn mixed with Nutmeg, and with fair Success if they be made up into Electuary with Conserve of Symplics of Oak-buds, I have often done the Business with *Oleum tartari per deliquium* alone, giving a few Drops frequently. *Hoffm.* wonderfully commends philosophick Spirit of Vitriol, and a Decoction of Chamomil, which he prefers before all other Medicines. I have experienced the following Medicines;

Take of Orange Water dr. with Sack, Rosemary each Ounces, Essence of Orange *Oleum Tartari per deliquium* each one Drachm, Syrup of Iron Pill, one Ounce, Make Mixture, and take a Spoonfull time. Or,

of Water
each two Ounces
Martholi,
each one
of Ammoni
of Mint
of Mint one

of any vo
ence. The
Muscadine
other gener
form of an E

of conserve
flowers each
self, Orange
radied each
powder of C
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make two D
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Appetite be
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§.

Mong the E
take these
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Meal. He
steeped in V
Brendelius
Longing.

of Water of Mint, Rosemary
each two Ounces, *Aqua Vita*
Martholi, Tincture of Cinna-
mon each one Ounce, Spirit of
Ammoniack twenty Drops,
Oyl of Mint eight Drops, Syrup
of Mint one Ounce. Mix them.

of any volatil oylly Salt one
Ounce. The Dose is thirty Drops
in Muscadine or Canary or any
other generous Wine. Or in
Form of an Electuary.

of conserve of Mint, Rosemary
flowers each one Ounce and an
Oyl, Orange and Limon Pill
each half an Ounce,
Powder of Cardamom, Cubebs
each three Drachms, Oyl of
each two Drops. Mix them.
Make an Electuary. The Dose
is the Quantity of a Chestnut,
three or four times a day.

of *guajacum*, *Sassafras*,
Sassa, and *Sassa* are good. If
Appetite be excessive, then we
obtain from Acids and keep
Spirit of Sal Ammoniack. Starch
and pultaceous things are good
in Case.

§. 33.

Among the Empirical Medicines
take these following. If Wo-
men have a depraved Appetite, *Ae-*
sculapius commends the Drinking
of mild and odoriferous Wine, and
of Shepherds Rod, especially
Meal. He also commends
steeped in Wine.

Arndelius says, that Starch
Longing.

Ful. Caesar Claudinus commends
this following;

Take of Mustard half a Scruple,
Pigeons Bones burnt and pow-
dered one Drachm and an half,
Seed of Purslain one Drachm,
Cinnamon two Scruples, juice of
Quinces two Ounces, white Su-
gar three Ounces. Mix them
in a double Vessel over the
Fire. The Dose is half an
Ounce every other Day in the
morning.

Job. Rhodius *Observ. Medic.*
Centur. 2. pag. 97. has observed
Longing to be cured by the Flux of
the Hemorrhoids.

Schroder commends sowre
Pomegranates and Vine leaves.

Trotula says, If a Woman
with Child long for ill things, give
her Beans with Sugar.

Arnoldus Weikhardus uses the
following external Medicine;

Take of Citron Pill, *Acacia*,
Calamus Aromaticus each half
an Ounce, Leaves of Turkish
Bawm two handfuls. Boyl
them in Wine and bruise them
and put to them, when brui-
sed, of Oyl of Nard, and Ma-
stich each a like Quantity,
With the Crumb of brown
Bread make a Cataplasim, and
apply it hot to the Stomach.

Rrr 3

§. 34. Cure

§. 34. *Cure of Abortion.*

IN fear of Abortion the *Ancients* let Blood, and where there is a notable *Cacochymy*, repeat gentle Purges; in the middle Months especially, and now and then all their time of being with Child they give divers *Astringents* and *Strengtheners* to prevent Miscarriage, several of which were described in the immoderate *Menses*. When they are not with Child, they say, all ill dispositions of Body, which used to cause Miscarriage, must be removed; such as *Plethory*, *Cacochymy*, and peculiar Diseases of the Womb, for instance, *Intemperature*, *Inflammations*, *Ulcers*, &c. and divers external things, which you may see in *Riverius c. 17. de Abortu*.

§. 35.

Sylvius varies his Cure, according to the Causes. In a *Plethory* therefore he orders diminution in time, sometimes immediately after Conception, Excessive motion of the Body, Falling, Frights, too much Watching, excessive heat of the Air, *Diarrhoea*, *Dysentery*, and *Hæmorrhage*, some of them must be forborn and others cured. They must have a care of all enormous letting of Blood, and violent Purgers, but especially of such Medicines, as used to promote the *Menstrua*. And all strong drink must be avoided.

But Abortion, which proceeds from a bad Conformation of the Mo-

thers Belly, or from another Child in his Opinion, can scarce ever be cured.

When part of the after burthen remains in the Womb after Miscarriage and causes a continual efflux of Blood for some Months, he has often had success in the following *Apozem*, by giving three Ounces of it twice or thrice a day;

Take of root of Bistort two Drachms, leaves of Majoran, Penny-royal each one handful. Boil them in Water, and white Wine what is sufficient. In twenty Ounces of the Colature, dissolve of Syrup of Mugwort two Ounces, Cinnamon Water half an Ounce. Mix them.

§. 36.

IN our Opinion, to prevent Abortion (for sometimes it cannot be prevented, as appears from discounting the Causes) first of all the humors must be reduced to their Natural state; and if there be any disorder in the animal Spirits, it must be rectified. If the Woman be *Plethorick*, she may be let Blood about the middle of her time. All diseases in the Womb, that are apt to Cause Abortion, must be cured before. The Medicines that are given, must strengthen the Mother, the Child, and the Placenta. To which purpose kindly Balsamicks, Aromatick, Spirituous things, and gentle Astringents are good, such as tincture of *Coral*, *terra Japonica*, *liquor stypticus balsamicus*, *tinctura antiphlogistica*, *Magistery of Coral*, *Ivory*, *Specificum cephalicum*, Nutmeg, Bistort

Grab's Eyes, Cloves, Mace,
aqua epileptica, vitae
cordialis H. Saxon.
 of Cinnamon, and its tincture,
 other things. We will give you
 receipts. If therefore it be
 that a Woman may mis-
 upon a fright, it will be pro-
 to take frequently a spoonful
 the following liquor;

Take of *aqua epileptica Langii*,
aqua mulierum each one Ounce
 and an half, Magistery of Coral,
Specificum cephalicum, emerauld
 prepared each half a Scruple, Sy-
 rup of Cinnamon six Drachms.
 Mix and give it. Or,

Take of prepared Ivory, *pulv. mar-*
cion. Powder of Pearl each half
 a Scruple, *trochisci de spodio* fix
 Grains, distilled Oyl of Nutmegs
 two Grains. Mix them. Make
 Powder. Divide it into two
 equal parts for twice taking.

Ummertus has the following
 powder;

Take of Magistery of Coral one
 Drachm, prepared Pearl half a
 Drachm, shavings of Ivory one
 Drachm, Mastic half a Drachm,
 grains of *Chermes* one Drachm,
maius Christi perlat. two
 Drachms. Mix them. Make a
 Powder.

If Abortion be feared from
 morning, this following will be
 per;

Take of *aqua cinnamomi boragina-*
ta, cordis cervini, cordial. H. Sax-
 on. each one Ounce and an half,
 tincture of Coral half a Drachm,
 Syrup of Pomegranates fix
 Drachms. Mix them. Give it
 by spoonfuls.

If it come from Anger, An-
 tispasmodicks, Antiepilepticks and
 Bezoardicks will be proper in this
 case: for instance;

Take of Water of Black Cherries,
 Linden tree Flowers, *aqua epi-*
leptica Langii each one Ounce,
 Syrup of Coral, Peony each
 six Drachms, tincture of Coral
 one Drachm and an half. Mix
 them.

You may also give Magistery of
 Ivory, and Elks hoof.

If it come from a too great Flux,
 then very Astringent things, and
 Stomachicks will be proper, and
 sometimes Opiates, and Cydo-
 niates, *laudanum cydoniarum*
Hoffmanni, and the skin of a Hens
 Gizzard. But in general *pulvis*
contra abortum Augustini. and
 Magistery of Coral with juice
 of Citron, and other moderate
 Astringents are good against Ab-
 ortion.

If a Woman always Miscar-
 ry, let her take this follow-
 ing;

Take of *aqua embryon.* two
 Ounces, Nutmeg one Drachm
 and an half, *Saccharum resu-*
tum, or *perlatum*, as much
 as will make it grateful,
 Or,

Take of Conserve of red Roses one Ounce, *condit. cortic. citri* half an Ounce, *confectio Alkermes incomplet.* two Drachms, *species de Hyacintho* two Scruples, *pulvis contra abortum Augustan.* two Drachms, *Marchion.* two Scruples, emerauld prepared, red Coral prepared each one Drachm, Pearl prepared half a Drachm, Ivory prepared without Fire one Scruple. With the liquor of candied Nutmeg make an electuary. Let the Patient frequently take the quantity of a Chestnut.

Tinctura granorum chermes Zwelferi, about thirty drops at a time, is an *Herculean* remedy.

The following mixture is to be given a spoonful at a time;

Take of Water of Mint, Orange pill each two Ounces, *aqua vite mulier.* tincture of Cinnamon each six Drachms, red Coral prepared two Scruples, distilled Oyl of Mace five drops, Amber-grise two Grains, Syrup of Orange Pill, Limon Pill, each what is sufficient. Mix and give it.

The Italian Women use tincture of Roses.

Capivaccius uses Powder of *coccus infectorius* with a little Mastich in a reer Egg.

In Miscarriage, where there is also a Flux of Blood from the Womb, this following will be proper;

Take of Mastich, *terra sigillata* white Frankincense each one Scruple, Dragon's Blood, Beza Armenick each half a Drachm. Mix them. Make a Powder. The Dose is a Drachm.

Externally Cataplasms of white Bread and Sack, sprinkled with Powder of Cloves, Nutmeg, Camphor, Mint, Majoran, flowers of white Roses, *balaustia* and the like, may be applied, or Astruc's gent liniments, adding oyl of Ammoniac: for instance;

Take of *Unguentum Comitum* one Ounce and an half, Oyl of Mastich three Drachms, Nutmeg distilled six Drops. Mix them.

Lud. Bourgois has a fomentation of leaves of Cypress, Majoran, Rosemary, Mint, flowers of Chamomil and Pilewort. Also a bath may be made thereof, which may be sprinkled with *aqua vite mulierum*, or some Strong Water. The same Person has also an excellent Plaster;

Take of *aqua vite mulierum*, *balsamus embryonis*, or Sassafras two Ounces. Let it be applied hot to the Pubes, either with a Crust of Bread, or without Clothes.

grievous Symptoms, as
Gripes, &c. must be miti-
gated with Clysters, Electuaries,
Purges, and a Woman must
be careful of such things, as cause
Pain.

§. 37.

the following we reckon
among empirical Medicines.
Cels. Baricellus Hort. Genial.
says, That medlar Wood
about ones Neck prevents
Migraine. Pet. Forestus com-
mends the Stone found in the
Heart, or Guts of a Stag,
as an amulet. I. Hartmannus
commends the drinking of the
urine of a Crey-fish in good
wine, once or twice every

Heurnius magnifies the fol-
lowing Cere-cloth applied to the
back and os sacrum;

of Blood-stone, white Frank-
incense each half an Ounce,
Mastic, laudanum each one
Ounce, Sumach two Drachms,
Olibanum half an Ounce, Pine
oil what is sufficient. Make
a Cere-cloth.

Scapulus Hollerius writes, that
the Land the Gentlewomen there
often apply a Cake of Tansey
to the Pudendum with good Suc-
cum, and to make it smell the
better, they rub it in their
urine, or roast it a little in Em-

Dom. Leo. commends the skin of
a Hog burnt, and drunk in

Philippus Mullerus miracul.
chymic. l. 5. for Abortion, com-
mends, the skins of Hens Gizzards,
dried and powdered, and a little
given every Morning fasting in
Wine.

Riverius commends the two fol-
lowing Medicines;

Take leaves of Gold, No. xij. spo-
dium one Drachm, the Traddles
of three Eggs, that are not
wind Eggs. Mix them well,
till the Gold be broke into
very minute parts, then dissolve
it in half a Glass of white Wine,
give it in the Morning fasting,
for three days, and apply the
following Plaster;

Take of Olibanum powdered three
Ounces, five Whites of Eggs.
Stir them well over the Coals;
keeping always stirring, lest
they clot. Add a little Tur-
pentine. Take it up in Tow,
and apply it as hot as she can
bear it to the Navil twice a Day,
Morning and Evening.

Daniel Sennertus, advises a Wo-
man, that is like to miscarry, to
wear an Eagle's Stone upon her
Arm, and under her Arm-
pits.

Gottfried Welsch says, That to
put a little Leven into the Navil,
prevents Miscarriage. And so do
the ashes of a Hedge-hog, made
into the form of an Unguent with
Oyl of Mastic, and applied to
the Pudenda. And he gives in-
wardly the Powder of a Childs
Navil-string; which is made
thus;

Take

Take a piece of the Navil-string, or that part, which after it is cut, sticks to the after burthen, wash it in Wine, and calcine it in a new Pot open in an Oven. Half or a whole Drachm of the Powder, with half a Scruple of Cinnamon and five Grains of Saffron, may be given in Sack and Mugwort Water.

§. 38. *Cure of a Mole.*

We will now briefly give you the Cure of a Mole. If then you are certain that there is a Mole, that is, a concrete Lump of Blood, you must do all you can to expell it: To which purpose you may give strong Purgers and Menagogues: for instance;

Take of *massa Pilularum fetidarium* one Scruple, extract of trochilces of *Albandal* three Grains. With essence of Savine, make Pills for once taking.

And forcing Clysters may be given, made of Savine, and Coloquintida tied in a Rag, the *Scoria of Regulus* of Antimony, &c. *Essentia ad Menjes*, and Essence of Savine about 40 or 50 drops is an excellent remedy. A fume may be made of Powder of Anise and Cummin seed each three Drachms, Savine two Drachms, which may be received through a Funnel. An Oyntment may also be made of Oyl of Coloquintida and *cheiri*. But do not use these things, ex-

cept you are certain of a Mole. This following is good for the same purpose;

Take of Water of Cinnamon one Ounce, bawm two Ounces, Essence of Saffron six drops, Oyl of Amber half a Scruple, Venetian Borax one Scruple. Mix and give it.

Philippus Grulingius says, there is no such successful secret as Powder of Secundine given with Mugwort, madder, or Penny-royal Water.

Massarius gives one Drachm of an Oxes Gall as a secret to expell a Mole.

Eustachius Rudius l. 2. cap. 1. says, this is a very effectual Medicine to extirpate a Mole;

Take of Oyl of Sweet Almonds half an Ounce, *Sesamum* Dill one Drachm, Sugar one Spoonful, root of female Fennel one Scruple, Oxes gall one Scruple. Give it a Woman in Bath.

Guerner. Rolsinc. epitom. m. says, "Some magnifie humane Secundine, and a Sheeps a Goats Secundine, powdered and given in Wine, for forcing away a Mole.

Jacob. Ruff. commends the following Pills;

Take of Seed of *nigella*, *Aristida rotunda*, dittany of Crete, Seed of wild Cressies, Savine, *Sagapenum*, Seed of Rue, Gum Ammoniack, *thymiana*, Madder, Myrrh, Castor, each one Drachm.

the juice of Horse radish and
they make Pills. The Dose
from half a Drachm to a
Scruple.

§. 39. Cure of the
Cramp.

the Cramp of Women with
Child these things are proper;
Unguentum cephalicum, Elks hoof,
Horse tooth, and other An-
tisepticks already mentioned in
Cramp. And outwardly *Un-*
guentum Spasmodicum Minsichti,
Ounce, Oyl of Worms two
Ounces, *aqua articularum ad*

extra one Ounce and an half,
Spirit of Worms one Ounce and
an half.

A Ring may be made of an
Elk's hoof, or a Sea-Horse's
Tooth.

§. 40. Cure of the Scia-
tica.

IN the *Sciatica* all things are
good, before mentioned in the
Gout.

And the Cures of the rest of the
Symptoms may be sought for in
their proper Chapters.

C H A P. V.

Of difficult Travail, a dead Child, and breaking the Water.

§. I.

A Woman above all Creatures is tormented most in bringing forth her young. Wherefore *Medea* in *Euripides* protests, she had rather engage in Battel thrice, than bear a Child once. But the Great GOD, *Gen. 3.* hath laid this Calamity on the Female Sex.

Description.

Difficult Travail therefore is, *when the Child cannot be born without Pain, and violent throws, and danger both to its self, and the Mother.* Now before a legitimate Birth the Water contained in the *amnion* must break, but neither the *os pubis*, nor the *os coxendicis* dilates, as many, contrary to experience, have thought. For the learned Anatomist *Georgius Francus* in his *Satyræ Medicæ*, shows by experience, that in Travail the *ossa pubis* remain close knit.

And Travail is called difficult from the Causes that make it so,

from the concomitant Symptom and from the event.

§. 2. *Part affected.*

ALL Authors take the Womb to be the Part affected, which they say is either affected, 1. In it self, as by its proper fault in temperament or Conformation: Or 2. By consent, namely, when the whole is either diseased or faint.

§. 3. *Diagnostic.*

Signs of difficult Travail are known partly by the Woman her self, partly by the Midwife and those that are by. The length of time, Pain and Throws, &c. declare it. For lingering, and long guid pains, which terminate rather in the Loins and Belly than in the Womb it self; and, 2. Grievous ones, which do not at all bring the Child forward, show the Travail to be difficult. But what the Cause is, it behoves the Midwife to enquire, and relate it to the Physician. Since custom has made usually Womens Work.

Travail

Travail also may be judged difficult from the preceding Causes, if any of all things have not gone with the Woman, the Child, the Womb, if she have used too hard labour, or if she be too young or too Old.

The natural and common Signs of difficult Travail are Pains in the Loins, the coming down of a Weight to the bottom of the Belly, quick Retention, and other Signs. And ever unusual Signs happen in excess or defect, argue the Travail will be difficult. And two especially, 1. Want of pain, whereby nature excites the animal to force the Child away; 2. When the pains are either too weak, a long time in coming and tending backwards rather than forwards. Wherefore Aristotle, 3. histor. animal c. 9. says, Women that are griped in their Loins are soonest delivered, they are pained in their Loins rather than in their hard Labour, and they that are pained at the bottom of their Loins have a quicker. 2. Breaking of the Water before the usual time. For it is a peculiar Sign of difficult Labour, when a great quantity of Water comes away before Travail, because the passage is therefore the easier.

Travail is reckoned difficult, if it last above four and twenty hours, and if there be any grievous symptoms in Travail, or pains attending it.

In regard of the Mother, whether she be weak, or broken with Diseases, she is best able to

In regard of the Child, Labour is known to be difficult, if

it stir seldom or weakly; for it is in danger of being strangled, or of dying: Or if the *Menses* or Blood, or after-burthen come first: If the Mothers Breasts, which were full, extenuate on a sudden, or if much or watry Milk run out, these things show the Child is not well, according to *Hippocrates Sect. 5. aph. 2.* If there be twins, the Labour is like to prove difficult. One may know the Child is weak by its crying. The Child is known to be dead, when it quite leaves stirring, whereas before it stirred briskly, and when the Mother finds it rowl to and again like a stone. A Sign hereof is, when the *Pudenda*, *Abdomen*, and the Nose are cold, and when the whole Body is several times chill; when the Face and Eyes of the Mother are changed in color, clearness, &c. If Milk run out of the shrunk Breasts, when an *ichor* or any other fætid matter runs out of the *Pudenda*; when there is a Fever, Palpitations, and Fainting: And you may know it by violent precedent Causes, that are apt to kill a Child.

If the way be in fault, the Midwife may find that. You may know, that the Secundine is tough, and cannot be broke, when the throws of Travail continue, and never the less no Water comes: Here is need of help, and the Midwife must tear the Membranes with her Nails.

§. 4. Causes.

§. 4. *Causes.*

BEfore we come to the Causes of a Preternatural Birth, let us consider a Natural. And in this the *Time* and *Manner* of Birth must be considered.

The *Time* of an humane Birth is reckoned by most Physicians to be the end of the ninth Month, after a Woman has conceived, whether the Child be alive or dead. A Natural Birth therefore happens about the two hundred and seventy third Day, or the twenty ninth Week, or the Ninth Month, Solar, not Lunar. There are Births in the seventh Month. So I observed it in a certain good Family, where the Woman brought forth six or seven live Boys in the seventh Month. I have observed that a Child born in the eighth Month may live: for beside several others, my eldest Son was born in the eighth Month, who is now six years old. You may consult *Sylvius* and *Drelincourt*.

It is false and ridiculous, that the Child endeavours its Exit in the seventh Month: Because there is neither Reason nor Experience for it: For Women feel neither Pain, nor any Endeavour in the Child after the seventh month, as *Sylvius* has well observed. And according to him, the Child comes at the seventh Month, when it is bigger than usual, and the Mothers Womb too little, or when the heat of the Air has dried up the Commissures of the *Placenta* and Womb, or upon some other Account. The Natural time of Birth therefore is about the end of the ninth Solar Month.

The *Manner* is reckoned natural when the Child comes to the World with the Face downwards, then the Shoulders, and afterwards the whole Body; or both Hands get out, and then the Head. The *Manner* is also reckoned Natural, if both Feet come first, then the Belly, the Breasts, and the Head last.

All that comes contrary, happens either through some Fault in the Mother, or Child, a bad Wife, an ill Passage, or upon the Account of some external Cause.

And the Mother may be in fault;

1. When she is weak or sick, and her Strength fails thereupon.

2. Labor proves difficult, when the Mother is too young or too old, because in such the Passage is too strait.

3. The Birth is hindered through the Mothers Fault, when she resists her Pains, and in her Travail composes her self badly for it; when she holds not her Breath, nor strains downwards towards the *Pubes*, as the good Women bid her.

4. The Birth succeeds ill, when the Mother is sick of any uterine Disease, or of a Disease in any Part near the Womb, to wit, a Rupture of the Womb, or if the *Vagina* be closed, &c.

5. It succeeds ill, when the Mother dies in the midst of her Travail; but then the Child is not born, but cut out of the Mothers Belly.

And the Child is in Fault, when either the whole Body, or Head and Shoulders are too large to come out at so narrow a Passage, when

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Birth, when it is ill turned
it is entangled in the Navil-
or when the After-burthen
ated from the Womb unsea-
or comes first; or when
membranes that involve the
are so tough, that the Child
break through; or when
Child is dead, which it often is
Mothers Womb, either
very Birth or before it.

Cause of a Dead Child.

the Cause indeed of the first
Death we have seen already,
causes of the latter may be
1. Some grievous Disease
Mother, which being com-
municated to the tender *Fetus* kills
the Mother recovering. 2.
grievous Disease of the Child,
whenever it come. 3. Want
nutritious Juice and necessary
4. Some uterine Disease
in the time of being, with
5. Plurality of Children,
on occasions the Death of one
Child, for the most part. 6.
fortune from external Causes,
may or not necessary, a Blow,
Bruise, Wound, Breach of
vessels and the like.
the Labour may prove dif-
ficult through the Midwife's Fault,
the Women by-standers, if
do not their Duty. Through
Midwife's, if she be ignorant of
Office, or bold and adventu-
rous, and cares not whom she kills:
she sacrifice more to *Bacchus*
than *Lucina*, if she be malevo-

lent. For thus, I dare say, seve-
ral are killed. *Sanè pol temulen-
ta est mulier, et temeraria, nec
satis digna cui committas pri-
mo partu mulierem, Terent. in
Andria.*

The By-standers may be the
Cause, when either they do not at
all, or not aright, what the Mid-
wife orders them to do.

§. 5.

AMong the Non-natural Causes
may be reckoned an over-
cold and dry Air, to wit, a Nor-
thern; for when a Woman with
Child has exposed her Body to it,
it straitens the Genitals, and hin-
ders them from dilating. And in
Winter time Labors are most diffi-
cult usually; because the Air
then impregnated with a constrin-
gent Acid offends teeming Women.
So likewise an over-hot Air occa-
sions bad Labor, as it wastes
Strength.

External Causes are meats that
are cold, moist, acid, salt, au-
stere, bitter, astringent, crude and
apt to corrupt, such as horary Sum-
mer Fruits eaten immoderately by
a Woman with Child. Also
drinking cold Drink, when the Body
is hot, is bad. I have twice seen
a Child killed, and quite mortified
by the Mothers drinking Drink
cooled with Ice.

Sleep and Rest in excess are bad,
and Exercise, which turns the
Child before the time. Sudden
Passions of the Mind are bad. And
so are Excretions suppressed, as
the Urine, which when it is not
made stops the Child, and so do
gross and hard Excrements in the
Guts.

The

The vain Astrologers Influences of the Stars signifie nothing in this Case.

§. 6. Prognostick.

ALL difficult Labour is dangerous either to the Mother or the Child, or both; especially if either or both of them be sick, and weak; if the Mother be too young or too old; if the Child come out with one Hand first, which is very bad; if the Child's Neck be entangled in the Navil-string. Difficult Labour is often attended by a Breach of some Vessel in the Breast, spitting of Blood, a troublesome Cough, Dilaceration of the Parts, and the King's-Evil, as I knew an Instance at *Hanover*. Some break the *Peritonæum*. Some have Ruptures in the Navil and the Groin. Some have the Sight of the Eye dilated, and loose their Seeing. Some get the Strangury. Some fall lame. Others grow barren. Some have their Bellies deformed with Wrinkles. A Prodigence of the *Vagina uteri* often happens in hard Labour, because by the Violence of the Pulling it is often forced to follow what it contained, and unless it be gently replaced, it produces several other Symptoms. When the Water has been long broke, the Child is in great Danger; because the Water serves it for Respiration as Air does us: for in Inspiration the Child takes it in, and in Respiration puts it out. Besides, when the Water is gone the Parts are dry, which should be glib, for the easie Passage of the Child.

If the Extremities be cold, a Lethargy, cold Sweat and Faint-

ing, Difficulty of Breathing, *liria*, Convulsions, Sadness, spair, Sardonian Laughter, are never-failing Fore-runners of Death. There are good hopes if the Mother be chearful, courageous, she have Strength, if she increase is well according to *Hippocrate* *Sect. 5. Aph. 35*. When the Labour is hard, and all things refuse well, we need not despair. Palsy of one Thigh sometimes remains after hard Travail. Here belong these Aphorisms of *Hippocrate*. *S. 5. Aph. 35. S. 5. Aph. 46. 55*.

§. 7. Prognostick of a dead Child.

DAILY Experience shows, that a Dead Child often kills the Mother; because it helps at all, and unless it come away it causes divers Inflammations, Tumors in the Womb, and in Parts adjoining, and several seales in the whole Body. Some Women who are strong and large made, or easily dilated, sometimes escape.

§. 8. Dietetick Cure.

AS for the Diet, the Air must be something warm: the Cold must be avoided, what harm it does the Womb and the whole Body of lying-in Women we have many sad Instances. Hereby the Blood is often coagulated, and Pains, Gripes, Anxieties, Swoonings, Fevers, and other grievous Diseases are often Bred by

Warm Air all lying-in Women well: for it disposes to sweat, which preserves from Diseases incident at time. The Meat must be is not of a Nature to stop *Lechia*, nor to provoke them much: For in this their *Lechia*. Therefore all acid, and windy Meat must be. All things likewise are that are fat, salt, austere, dried and fried, and Milk-Pullets, Partridge, *Le-* Veal, Lamb, Chicken- and Water-Gruel with Cur- are good. Wine and all things are naught for lying- women: For it puts them acute and Mortal Fevers: I know several Instan-

to Motion and Rest, lying- women would do well to their Bed for nine days, with- each time it is dangerous to

Excreta and Retenta be at their Natural

Passions of the Mind be moderate. Let them cheerful: for Anger and do mischief.

9. Pharmaceutick Cure.

Before I fall upon the Method of Cure, I will pre- some things about the Office of a Midwife. A Midwife be Faithful and Sworn, that never put a false Child in the of a true one, nor pierce Child's Scull with a Pin, nor

tear any thing with her Nail. She must be Pious and Modest, a Widow, and not young, but elderly, or of a middle Age; she must not be talkative, drunken, nor arrogant, not a Scold, nor covetous: She must take Pains and not be decrepit, so as either through want of Strength or Sight, or through the shaking of her Hand not to be able to do her Business aright. She must be skilled in Anatomy, especially about Women's Genitals. She must know the time of Birth very well, and how to distinguish Pains, and not mistake colick Pains in the Belly for Pains of Travail, nor wandering Pains for constant, and so waste the Woman's Strength by putting her on Labour to no purpose. She must by the Magistrate be ordered to be examined by Physicians, before she takes the Office upon her.

If the Child offer it self in a preternatural Figure, let the Midwife take the Advice of a Physician about it. And if the Physician find the Mother weak, he must prescribe Analepticks, that the Mother and Child may be enabled to undergo the laborious Task. For which end, some Wine mulled with Mace, the Yolk of a Egg, Sugar and a little Saffron will be proper; or a little *Confectio alkermes*, may be given frequently upon an Knife's point, the Mothers Navil may be rubbed with Canary, or *Aqua Anhaltina*, or *Balsamus vite*, or it may be applied with a Tost, or a Spoonful or two of *Balsamus Embryonis*, may be given.

You must strengthen the Mother and Child with Cordials, Spirituous,
Sff and

and aromatick things and volatil Salts, or with the like Internals mixt with Specificks: for Instance;

Take of Water of Rosemary, Orange Peel each one Ounce, *Aqua Vitæ Matthioli*, Tincture of Cinnamon each half an Ounce, *Confectio Alkermes*, or *Hyacinchi* one Drachm, Spirit of Sal Ammoniack aromatised twelve Drops, distilled Oyl of Mace two Drops, Amber two Drops, Syrup of Mint or Cinnamon fix Drachms. Mix them. Or,

Take of *Spiritus Salis aromatificatus*, or *Oleofus* one Ounce, Oyl of Orange Peel, Mace, Amber, each five Drops. Mix them, and let them stand in Digestion. The Dose is about twenty Drops, three or four times a day in Sack or some generous Wine.

The second Intention of the Physician consists in Dilatation, and Lubrication of the Passages. To which end an *Infessus* or *Semicupium* before Labour is good to facilitate it. The noble *Ettmuller* commends this following;

Take of Leaves of Mallow, Marsh-Mallow, Bawm, Flowers of Chamomil each three Handfuls, Mallow, Melilot each one Handful Seed of Line, Fenugreek each three Ounces, Root of Marsh-Mallow four Ounces. Shred them. Let the Woman sit over the Decoction, as long as she can well bear it, every other day, when she is near her time.

When the Sweat is wiped let her lie down in Bed, afterwards anointing her Navil and Loins with a Liniment of Mucilage Seed of Line, Fenugreek, Marsh-Mallow, Oyl of Sweet Almonds and white Lilies. All fat things are proper in this Case, Rape Oil and Fat of Animals; which the Midwife must use. According to *Sylvius* this Fomentation will be proper;

Take of Root of Marsh-mallow one Ounce, Leaves of the same and Mallow each one Handful and an half, tops of Melilot one Handful, Seeds of Fenugreek Line each three Drachms. Beaten and grossly bruised, boil them in fair Water, and a quarter of an hour before she goes to Bed, let her receive the ascending Fume; repeat it, till the Virtue of the Plants be gone, and then use fresh ones.

If after Travail either the *Collum* or *Vagina uteri* grow together the Coalition must be opened in time, and slightly cicatrized.

In a Plethory it will be good to let Blood, and the *Saphena* may be opened.

If the Body be costive, Clysters made with Uterines may be given: for the hard Excrements may hinder the Birth of the Child: for Instance;

Take of root of Marsh-mallow, Marsh-mallow each one Ounce, white Lilies, Bryony each half an Ounce the five emollient Herbs Flowers of Melilot, Chamomil each

half an handful, Wall-
flowers one Pugil, Seed of Fenil
Drachms. Boyl them in a
sufficient quantity of Milk. Add
lenitive electuary half an
Ounce, Oyl of balsam-Apple
one Ounce, *Species diacasto-*
one Drachm, Honey of Roses
one Ounce. Mix them. Make
Clyster.

Amnerus, the chief Physician
Nornberg, commends Oyl
Balsam apple, as excellent
Anoint the Orifice of the

when the Membranes are
tough, for the Child to break
through, they may be anointed
with this following ;

Oyl of Nuts, *Venice* Soap
two Drachms. Mix and
use it.

the Midwife, as was said, may
use them with her Nails, or a
Lancet.

If a carnosus excrescence or a
wart stop the way, they must first
be removed, to which purpose, Oynt-
ment for Warts and other Chirur-
gical means will be good.

And so other Diseases of the
Womb, must first be cured with
other remedies.

When there is an Hæmorrhage
from the Womb and Bladder, it must
be stopped with Altringents, espe-
cially with Opiates, *Diafscordium*,
&c. The heat of the Body must
be cooled; and all causes that
obstruct the Birth, must be re-
moved.

But in this case Forcers or Hæ-
morrhages, which have a specifick
property, either alone, or mixt

with other comfortable things, are
excellent. The most celebrated by
experience is *borax*. Wherefore
it generally makes up the *basis* of
all Medicines that promote the
Birth. I have seen several admi-
rable effects from the following
Powder, which is a most Serene
Princess her secret ;

Take of Amber prepared half a
Scruple, *Venice* Borace six
Grains, Powder of Hen's Giz-
zards four Grains. Mix them.
Make a Powder. It may be
given at thrice, in the follow-
ing mixture, or in some other
vehicle.

Take of Water of Penny-royal,
Bawin each one Ounce, *rubr.*
Danic. half an Ounce, tincture
of *Cassia* half a Scruple, Mix
and give it. It may be
given also alone by spoon-
fuls.

The following mixture is
famous ;

Take of Water of Cinnamon,
Penny-royal, white Lilies each
one Ounce, Gall of an Eel half
a Drachm, Borace, Cinnabar
of Antimony each one Scruple,
Spirit of humane Secundine half
a Drachm, Syrup of Peony
six Drachms. Mix them.

I have experienced Powder of
Rhinoceros horn from six Grains
to ten, given several times in
Vervein water.

Here also Medicines of Myrrh,
especially *flores sulphuris myrrhati*,
are good; and Medicines of Amber
and other volatyl things do the
same.

same. The following mixture, is not inconvenient ;

Take of Water of Motherwort two Ounces, Cinnamon half an Ounce, Borrage half a Drachm, Myrrh one Scruple, volatil Salt of Amber half a Scruple, Syrup of Cinnamon three Drachms. Mix them. Give it at twice, or by spoonfuls. Or,

Take of Water of white Lilies, Penny-royal each one Ounce, Cinnamon half an Ounce, Spirit of Soot, Powder of Secundine prepared each one Drachm, Syrup of Cinnamon or Mugwort half an Ounce. Mix and give it. Or this Powder ;

Take of an Horse's Stones dried one Drachm, Borrage two Drachms, Cinnamon, Saffron, each half a Scruple. Make a Powder and divide it into three equal parts.

Hoffmanus commends this following ;

Take of *Venice* Borace one Drachm and an half, *glacies Mariae* six Drachms. Mix them. The Dose is from a Scruple to half a Drachm in Cinnamon Water.

Belmont in hard Labor reckons the Liver of Eels, Serpents, &c. as a secret.

When the Water does not come away, a Fomentation of emollient Herbs is good-

When the Water comes too soon, it is good to apply Oyl of white Lilies or sweet Almonds

warm, and a Liniment of the Mucilage of Roots and Seeds Marsh-mallow, Line, and Fenugreek, drawn with Mallow Water.

In difficult Travail besides vegetables, these things deserve commendation, tinctures of Castor Amber, and Saffron, Oyl of white Amber, Man's skul, Harts-horn Soot, Goat's Blood, fetid Oyl of Tartar ; and Powders of human Secundine are more effectual, adding trochiscs of Myrrh, or Borrage or a tincture of it, drawn with Spirit of Wine, adding a few drops of Oyl of Savine.

Barthasar Timæus uses this following potion ;

Take of Water of Bawm, Cinnamon, *aqua hysterica* each one ounce, Myrrh one Scruple, Saffron half a Scruple. Mix them. Make a Potion, and drink it warm.

There are several external things which hasten the Birth ; as Sternutatories, Fomentations, or bags applied to the Navil. Amulets either hung about the Neck or applied to the Knees, Legs or Stomach, such as the Eagles stone, Blood-stone, Loadstone ; *styrax calamita*, Tiger's skin and the like. Liniments are often excellent : for instance ;

Take of *Unguentum dialthææ* five Drachms, Fat of Serpents two Drachms, of Quails, Oyl of Wall-flowers, white Lilies each one Drachm, Amber one Scruple. Mix and give it.

They may be girt with Girdle of a Man's or Stag's skin, which

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other things do good, as they
the compression of the Abdo-

When none of these things will
and the pains encrease, either
Mother, or Child, or both must
unless you cut out the Child.
when the Mother is dead it
be done quickly: for the
in the Womb cannot long
there. And Section of the
out of the Mother alive, is
said than done. But though
difficult and frightful, it is
possible, as we have several
ances.

§. 10.

NOW we will proceed to em-
pirical Medicines, where-
every good Woman has one.

I have by my own experience
several effects of a piece of
re's skin, tied to the left
igh.

Some tie the heart of a black
to the left Hip.

Joannes Agricola says, that,
once away a Child, the Secun-
or a dead Child, nothing is
ter then *aurum potabile*,

Petrus Bayrus ties the root of a
ard above the reins of a Woman
Travail, and, as he says, she
presently be delivered.

Jul. Caf. Claudinus, to bring
s, gives two Ounces of warm
ter, and a little Honey.

Hermannus Corbæus Gynæcii,
t. c. 5. gives this as an infallible
ret;

the Nettle root, boyl it in Wine;
and in a draught of that Wine
give of Powder of Cinnamon

two Drachms, Saffron one Scruple.

Or white Amber and white
Hawk's dung each half a Scruple
may be given in Wine.

Claudius Deodatus will have a
Woman to chew Bay leaves in her
Mouth, and to tie them above her
Navil.

Let Vervein with root of Poly-
pody be tied to her Hips.

Franc. Oswald. Grembs in diffi-
cult Travail commends a Drachm
of *Lapis Specularis* drunk in white
Wine, and the Eyes of a Hare,
taken in March.

Phil. Grulingius says, *Med.*
pr. l. 4. part. 4. c. 4. In hard Labour
there is not a more present remedy
than this. Give the Patient a piece
of *Boletum Cervinum*, as big as a
small Bean, to chew a little, then
bid her rub her Navil with the one
half, and keep chewing the o-
ther.

Helmont magnifies the Liver and
Gall of an Eel dried and powdered,
and drunk in Wine, about the
quantity of a Hazle Nut. And he
says, there is the gift of GOD in
this simple experiment.

Conrad Kubnrad. medull. destil-
lator. p. 1. has this following ex-
periment for hard Labour;

Take two live Crab's, bruise them
and strain out the juice. Add of
Fox and Hare's Fat, each equal
parts, melt them at the Fire:
then put in the foresaid juice.
Mix them, and make an Un-
guent.

He also says, it has been often
tried, that if Rosemary be bruised,
and steeped four and twenty hours

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in Vinegar, and a little of it tied to the Womans Navil, and half a Drachm of prepared Amber taken also inwardly at the same time, in Wine or Mugwort Water, it will hasten the Birth. He also says, it is a certain experiment, if the Woman in Travail take a little of her Husbans Urine.

Simon Paulli says. this is a never failing experiment ;

Take of Seed of Lavander half a Drachm, Plantain, Endive each two Scruples, Pepper one Scruple. Mix them. Make a Powder. Let the Patient take it in three Ounces of Woodbind and Endive Water. Or,

Take of Seeds of Lavander half a Drachm, white Amber, Borace, each two Scruples, Oyl of Cinnamon nine drops. Mix them. Make a Powder for three Doses in Rhenish Wine.

Franc. Ranchinus has this following;

Take two Drachms of *spermaceti*, in Cinnamon Water, or in a Decoction of Motherwort and Mugwort.

Eustachius Rudius says, this following has been tried by long experience ;

Take of the rind of *cassia fistula* one Drachm, *asarum*, Cinnamon, Saffron, Savine each half a Drachm. Mix them. Make a Powder. The Dose is one Drachm.

Jo. Andr. Smitzius commends

five or six Grains of Juniper Berries.

Martinus Schmak gives two pieces of white Lily root. He also gives the Water in which two Eggs have been boyled hard.

Joh. Schroderus highly commends the tears or Gum of Hart about three Grains, in hard Labour.

Sennertus gives a few drops of the liquor destilled of hazle Wood in some convenient Water. He also commends a dried Secundine amulets of Snake's Sloughs. He also says, that Coral, Jasper, Knotgrass root, and green Coriander does hasten Travail, tied either to the Hip, or to the Soles of the Feet.

Arm. Weikerdus his Secret is one Drachm of *Pseudo Melanthium* in strong Wine.

Some also say, that a *Glossopetra* held in the Womans hand till it is warm, hastens her Travail.

Columbine Seed powdered and drunk in Wine, is good to hasten Travail.

And so is *dictamnus Creticus* both inwardly and outwardly.

The Rose of *Jericho* put into a glass of Wine, makes a draught, highly valued by some for hard Labour.

§. II. *The Cure when the Child is Dead.*

When the Child is Dead, and so the difficulty in Travail the greater, care must be taken to force it away presently, lest it putrefie and endanger the Mother. And all the things before mentioned,

joined, that promote the
and the *Menses* powerfully,
wife force away a dead
such as roots of white
aristolochia rotunda,
Iris, *asarum*, black
leaves of Savine, Dra-
Motherwort, Saffron, Ma-
Gums, as Myrrh, Aloes,
Ammoniack, *Galbanum*,
Pulp of Coloquintida
like. We in this case do
use trochiscos of Myrrh,
Borax, Savine leaves,
Filings of Steel, &c.
never, as some Authors
advised, durst yet use Vo-
All Balsamicks, that resist
action, are good: for in-

of white Dittany, Cinnamon,
of a Horse, Borace each
a Drachm, Castor, Myrrh,
each half a Scruple. Mix
them. Make a Powder and
divide it into three equal parts.

Moræus commends this fol-
lowing;

of Wall-Flowers, *Venice*
wax, white Amber prepared,
leavings of Savine wood, *Gallia*
officinalis, Saffron each half a
Scruple, *confectio Alkermes*
half a Drachm, prepared Pearl
half a Scruple. Mix them.
Take it in Cinnamon Water
warm. Or this following may
be given at one Dose;

of *aqua carbunculi* two
Drachms, Water of Cinnamon,
white Lilies each half an Ounce,
Cardial. H. Saxon. calid. three
Drachms, *Venice borax* half a

Scruple, Salt of Snake's eight
Grains, *Balsamus vite* three
drops, essence of Saffron two
drops. Mix them. Make a
Potion.

A *Pessus* may be made of Gum
Sagapenum.

§. 12.

Vhen Physick will not
do, we must go to
Chirurgery. Which is perform-
ed by the Hand or Instru-
ment.

§. 13.

These Medicines following are
empirical.

Tobias Dorncrellius says, to
expel a dead Child at any time,
pound some Rue and Scammony
together, incorporate them in
Coton, and put them into the
Matrix.

Petrus Forestus gives the juice
of green Lovage leaves in Mugwort
Water, or Beer, or Wine. He
also commends the following
Powder;

Take of *assa fetida*, half a Drachm,
Seed of Rue, *cassia lignea*, Date
stones, Borace each one Drachm
and an half, Saffron half a
Drachm, Myrrh, *theriaca dia-*
tesaron each one Ounce. Mix
them. The Dose is one Drachm
in Savine Water.

He says also *observat.* 76. that
he gave a Woman, who could not
be delivered of dead Twins, a
Decoction of Mugwort and Savine
with Lily Water, and he took
Sff4 green

green Savine, adding a little Powder of Saffron, wrapt it in a linen Cloth, in form of a Pessary; he ordered it to be dipt in Oyl of Lilies, to be put up into the Womb, and to be kept there a little. After taking of which Medicines the Woman was in a quarter of an hour delivered of a dead Child.

David Herlicius says, nothing is better than a Decoction of Linseed, or it may be injected into the Womb.

Domin. Leo says, a dead Child may presently be brought away by a Pessary made of Coloquintid Galbanum, root of Snake-root and black Hellebore.

Maroldus commends a Plaster of boyled Coleworts, mixt with Fat. He also highly values a Decoction of *Iris* leaves.

Semertus commends fifteen or twenty drops of Oyl of Hartswood, drunk in Wine, and Testicles of a Horse.

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C H A P. VIII.

Of the Symptoms of Lying-in Women.

§. 1.

Several Symptoms attend lying-in Women: we shall examine the chief. In some Secundines remain behind, in the Flux of the *lochia* is too much; all have pains, and a Milk Fever; want Milk in their Breasts; have too much and coarcted; hereupon ensue Inflammation, Hardness and an Erysipelas. What other Diseases occur, they may be seen in their Chapters.

§. 2.

THE After-burthen is called Secundines à *Secundis*, because it is, as it were a Second Birth. It might very well be denominated à *Sequendo*; because by it should immediately follow the Child. It is called *loculus*, *locus*, &c.

Description of the After-burthen.

THE Secundines are the Membranes that inwrap the Child, or the third and outmost Coat of the Child, beset with Veins and Arteries arising from the *Corylodon*, and fastened to them, and it is fastened likewise to the Navil of the Child by the umbilical Vessels; and in a Natural Birth it always comes away with the Child, together with the *placenta uterina*. But in a preternatural Birth, sometimes after the Child is Born, the Secundines tarry behind in the Womb.

§. 3. *Description of the Lochia.*

IN every Birth the *placenta uterina* is separated by the Midwife, whence proceeds a Flux of Blood after delivery, which Blood being lodged in the cavernous substance of the Womb, and evacuated, is called the *lochia*, or Child-bed Purgations. Some lying-in Women have their *lochia*, for two, three,

three, four days or more, some have them eight, ten days, or more; and sometimes more, sometimes less Blood comes away in the time. Which a good Physician ought well to consider, and whether the Flux be natural or preternatural. For Women that have abundance of *Menses*, have more of the *Lochia*.

§. 4. *Description of after-Pains.*

PAins do not only come upon Women in Travail, but after, which are often so violent, as to produce not only a Fever, but a *delirium* also, and sometimes Death. The good Women therefore are out, who think these Pains are good for those that lie-in; for in their opinion Pains promote the *lochia*, which is altogether false, as *Sylvius* says very well, Therefore because the Cure of these said Pains is neglected and hindered by many, as beneficial, yet the neglect thereof costs many Women their lives in Child-bed.

§. 5. *The Milk Fever, Hardness, Inflammation and Erysipelas.*

THree days or more after they are brought to Bed, Women are taken with a shivering, and a Fever. And so the Milk undergoes divers mutations, and sometimes is coagulated, which causes hardness of Breasts, Inflammation and an *Erysipelas*.

§. 6. *Signs of the Retention of the After-burthen.*

Signs of the Secundines retained are manifest to the Midwife and Women that are by.

Signs of Flooding.

YOU may know a Flooding by the large efflux of Blood, Faintness, Swooning, Paleness, Leanness, and such like grievous Symptoms, which usually attend other immoderate excretions of Blood.

Signs of deficient Lochia.

YOU may know the *Lochia* are suppressed, partly by the Lying-in Woman her self, and partly from the by-standers, by dull pain of the *Hypogastrium*, loyns, *Abdomen*, swelling of the Belly, difficulty of breathing, Fever, and other supervening Symptoms.

Signs of a Milk Fever.

A Milk Fever or Ague known principally hereby viz. that the Child-bed Woman three days after her Delivery, taken with a shaking, and afterwards with Heat, Thirst, swelling of the Breasts, uneasiness of the whole Body, &c. Which is sometimes attended with an Inflammation, and an *erysipelas* of the Breasts and other parts.

Cause of the Retention of the After-burthen.

often happens in Travail, especially a difficult one, that the Child is come into the World, either because the umbilical Vessels are corrupt, or too small, or because they are entangled about the Neck or other parts of the Child, or because they are pulled violently by the Midwife, or because the Secundine sticks too fast to the Womb, or for some other Cause, to wit, the Mothers weakness, or the closing of the parts, or the breaking of the Vessels by the violent Air, or some other way, the Secundine remains in the Womb, and cannot conveniently be delivered.

8. Cause of Flood-ing.

Flood-ing has several causes, a Retention, thinness or thickness of the Blood, its Acrimony, or violence of the Motion, the disorder of the animal Spirits, but especially the Perforation or breach of the Arterial Vessels after delivery. The external Causes are the Air, too hot; Aliments and Medicines too sharp, and Menagogues, the Watching, unseasonable Exercise, excessive motion of the Body; before they that apply themselves to business before their Menstruation is out, are subject to this. Sudden passions of the

Mind, as Anger. Other excretions suppressed, besides other things which may befall them as a blow, fall, &c. Or the violent dilaceration of the Midwife, that causes an excoriation of the Womb, which must needs be painful, especially when any great Vessels of the Womb are broke. Sylvius says, the primary Cause of After-pains, is the close connexion of the Secundine with the Womb; and the second is the flowing of the Blood by the rent and excoriated parts of the Womb, which corrodes them, especially when the Blood is sharp.

§. 9. Cause of the Suppression of the Lochia.

A Suppression of the *lochia* is, when after delivery either no Blood at all, or very little, and that Serous or Pituitous, either with or without Pain, is voided by the Womb. It proceeds from some fault in the Blood, or Diseases of the Womb and its Vessels, rarely from the Diseases of the *vagina* and other parts. The Blood is in fault, when there is little in the Body, and when much of it was lost before the Travail, and in it, when it is Grumous and Thick, as it is usual after delivery, at which time even such as have their *lochia*, usually void great clods of Blood, and sometimes also it is so Phlegmatick and Viscid, that it stops the Vessels. The Vessels also may be in fault, when they are obstructed and compressed by a tumor of the Womb or of other parts,

or

or are straitned by the cold ambient Air, or over cool, increassant and astringent Food, or Medicines Internal or External. External causes also may be in fault, the Air, Meat, Drink, and Medicines too cold, over much Watching, too much Sleep and Rest, sudden and grievous Passions of the Mind, sudden cooling of the Hands and Feet, a Fever, or any other Disease. Pain also may stop the *lochia*. For *Ettmuller* has observed, that it is not the Translation of the matter to the Breasts, that stops the *lochia*; but the pain; for notwithstanding the Breasts are full, when the pain ceases, the *lochia* come again. And he has several times observed, that after-pains have stopt the *lochia*. The Cause of After-pains, when the *lochia* do not come well, or not at all, is when there are sharp humors in them, which exulcerate and fret the parts, by which they must pass.

§. 10. Cause of a Milk Fever.

A Milk Fever may easily arise, either because chyle flows by its ducts in greater quantity than usual into the Mass of Blood, and disturbs it, or through the Retention of the *lochia*, or too violent After-pains. I think that the Cause of these Fevers may also be some insensible and heterogeneous Particles, which traversing the Blood, do put it into an Effervescence.

§. 11. Cause of want of Milk.

THE Breeding of Milk is hindered, either by some fault in the Breasts, or in the Chyle. The Breasts are in fault when the glands are wanting, or when they intercept either to breed or keep Milk. The chyle is in fault, when it does not come at the breasts. Or when though it be carried, it is unfit.

§. 12. Cause of too much Milk.

THE Cause of too great a store of Milk, is laudable, and plentiful chyle, the non-naturals being in good order, especially a good constitution of the Glands of the Breasts, which consists in their softness. For it is observed, that Women who have such Glands, have the most Milk.

§. 13. Cause of curdling of the Milk.

Milk Curdles in the Breasts through some acid put into it.

§. 14. Cause

Cause of Inflammation of the Breasts.

Inflammation has generally a Fever with it, and arises from the Sulphureous Particles carried to the circumference of the Breasts, the external parts, the very Particles of Blood, are still above the rest, if they hinder their appearing, do kind of redness in the surface of the Patient: And an Inflammation of nothing but a preternatural quantity of the Blood, got into its Receptacles.

15. Prognostick.

One may expect as bad from the retention of the Secundine as from the retention of a Child. And if they are not got out by Nature or Art, the Patient must die.

The suppression of the *lochia* is a dangerous case, not only because several Diseases are caused by it, but several ones may be bred in the whole Body, as acute Fevers, Mania's, Melancholy, Pleurisies, Peripneumonies, Inflammations of the Womb, &c. There may be a *stupor*, Paleness of the Face, and Convulsions, there is no hope of recovery. Lying-in Women are cured often of this, either by a long Haemorrhage in the first place, or by a plentiful

Flooding, as it weakens and kills Women; so it may cure several Diseases, which

you may see in other Haemorrhages.

After-pains are easily cured, because sometimes they go away of themselves.

The Milk-Fever portends no bad, if care be but taken, that the Effervescence of the Blood once raised degenerate not into a worse; and if the Breasts fill, the Milk be drawn out: Otherwise an Inflammation, Tumor and Abscess of the Breasts may be feared.

§. 16. Dietetick Cure.

IN these Diseases the *Air* must be Serene and Temperate, above all things a cold Air must be avoided. The *Food* must be of good Digestion and Juice; and let Women have a care they take no Acid, for it is very mischievous. The *Motion* of her Body must be moderate, and for nine days she must, if possible, keep her Bed, Sleep is good, and *Watching* is naught. The *excreta* and *retenta* must go well. Let the *Mind* be kept cheerful, and free from any Passion.

§. 17. Pharmaceutick Cure of the Secundine.

THE Ancients say, the retained Secundine may be forced away with such things as bring away a dead Child. Among other remedies, they say, it may be extracted by the hand of a skillful Chirurgeon. And if it stick so fast to the Womb, that it can no other way be got out, but putrefies

fies there, they say, Suppuraters must be put into the Womb, mixt with Detergents. To this end *Rondeletius* commends *Unguentum basilicum*.

§. 18.

Sylvius, who thinks it proceeds from the abuse of gross and glutinous Food, which produces the like Blood, that the After-burthen sticks so fast to the Womb, commends things that correct glutinous Phlegm, namely lixivial Salts, volatil and fixt, Aromatick things, Phlegmagogues, and a correct Diet; Sudorificks, Diureticks, and Emmenagogues.

§. 19.

IN my judgment the intentions of Cure, are to expel the Secundine presently, to mitigate the Symptoms, and to preserve strength. Things that bring away the Secundine, are either Pharmaceutick or Chirurgical. The Pharmaceutick are such as powerfully expel the *Menses* and a dead Child. If therefore a Woman, after she is delivered, cannot get rid of the Secundine, for want of strength, she must first of all be refreshed with convenient Food, as Caudle made with Wine, Saffron, Sugar and Eggs, gelly broths of Chicken and Partridge. Then she must hold her Breath, and squeeze her Belly. And the Midwife must do her Office. Fumes and bags may be used, made of Uterines.

Here divers Internals are proper which we have mentioned before. But a Drachm of the Powder of

dried Secundine given in bro has a specifick virtue. And so has a Drachm of the skin of a Hen Gizzard, given in white Wine. Or the Powder following, or some such like may be given;

Take of Amber prepared on Drachm, Borace half a Drachm, Trochisces of Myrrh one Scruple, Mather half a Drachm, Saffron half a Scruple. Mix them. Make a Powder. Give a Drachm in Wine and Sugar. Or,

Take of Venice Borace, white Amber each one Scruple, Saffron *cassia lignea*, Castor each half Scruple. Mix them. Make a Powder. Or this decoction;

Take of root of *Scorzonera*, Peony Cichory each one Ounce, leaves of *Scordium*, Borrage, Bawley Mugwort, each half an handful. Boyl them in fair Water. Add to the colature of Syrup of Mugwort, Limons each ten Ounces. Mix them.

Joel gives the following Powder;

Take of Castor, Myrrh, liquor of Storax each one Scruple, Cinamon, *Aristolochia rotunda* each half a Scruple, trochisces of Agarick half a Drachm, *Diagium* five Grains, Saffron, *Sassafras montanum*, Savine each five Grains, opium of *Thebus*, *fatida* each six Grains. Mix them. Make a fine Powder.

And she may take sneezing Powder.

§. 20.

Among Externals the noble
Ettmuller commends this
following;

of leaves of Motherwort,
Senny-royal each one handful,
Senny two handfuls, Berries of
Senny, Bays each one Ounce,
Senny half an Ounce.
Boyl them grossly, and boyl
them in fair Water, the hot
Liquor whereof may be received
in a Funnel in a Close-stool Cafe
while, and may be repeated se-
veral times.

if the liquor cool again too
hot it may be made hot with
hot stones or Iron cast into it.
It may also be made of these
Ingredients, and applied to the

§. 21.

There follow several empirical
Medicines. Horatius Au-
gustinus commends a Drachm of the
Ashes of a Horse dried in an

and Herlicius holds the Se-
cret of a Sheep or Goat to be a
Secret, if it be dried and powder-
ed given in Wine or made up
in Oyntment for the Neck of
the Womb. He also commends
the Ashes of a Capon dried and
powdered, and given in warm

Primerosius says, it is the
best of some, to swallow the juice
of Bayons, and to drink warm
Water it.

Riverius wonderfully commends
the following Decoction;

Take of rose Vinegar eight pounds,
Leaves or Berries of Bay three
handfuls, a rose Cake left after
distillation, cut in pieces. Boyl
them in a Kettle, and wash the
Hips and Legs a long time with
this Decoction hot, from the
twist to the Feet.

Job. Andreas Smitzius says,
that the juice of Lovage drunk
with Wine is an admirable secret
to bring away the Secundine, the
Menses, a dead Child, a Mole, and
to help Fits.

Job. Schroder. highly commends
the Stomach of a Lamprey for
bringing away the Secundine.

Daniel Sennertus commends
dittany of Crete, Oyl of Hazle, and
prepared Secundine:

§. 22.

THE old Galenists say, the
Cure of After-pains consists in
opening the Vessels of the Womb,
thinning the Blood, and tempering
the Acrimony. Forestus commends
a Decoction of Chamomil Flowers
in Beer, and a Decoction of Mug-
wort. Riverius magnifies the
following Powder, if it be given
immediately after delivery;

Take of Comfrey root one Drachm,
Peach stones, Nutmeg each two
Scruples, Amber half a Drachm,
Amber-grise half a Grain. Mix
them. Make a Powder. Let
the Lying-in Woman, take one
Drachm of it in white Wine;
And if she have a Fever, in
Broth. Let her use for her ordi-
nary

nary Drink a Decoction of Parsly Roots Mugwort and Cinamon.

If After-pains proceed from bilious Humors, they are cured as the Colick.

§. 23.

Splivins varies the Cure according to the Causes. If the racking and repeated Pains come from an Acid or a Salt, redounding in the Blood and carried to Womb, they must be cured by volatil and aromack Acids. If the Womb is excoriated, it must be healed by Vulneraries. If the *Lochia* be excessive, by Astringents To which end he uses the famous Mixture for Hamorrhages, and mixes Vulneraries and Narcoticks together. He injects also Vulneraries with a Syringe. If the Blood of the *Lochia* be ferous, he gives Anodynes in Form of Emulsions, and now and then *Opium*. And if the Woman is not very weak, he gives a gentle Hydragogue to evacuate the *Serum*. Then he gives Sudorificks made of Astringents, Roots of Avens, Tormentil, &c.

When the Blood by stagnation is turned acid, he gives things to temper Acrimony, but so as not to encrease the Flux of Blood. To which purpose he gives gentle Aromaticks and astringent Vulneraries, such as Betony, *Scordium*, Golden-rod, Burnet, Vervein, Tansey, Milfoil, &c. Where to divers Uterines may be added, Majoran, Mountain Calamint, Penny-royal, Rosemary, Garden-Rue, Sage, &c.

When the after-pains proceed from the Suppression of the *Lochia* by external Cold, he gives Medicines to provoke the *Lochia*.

But if, when the *Lochia* comes the Pains remain, then Sudorificks will be proper, neither very aromack, nor very Astringent, lest the Flux of the *Lochia*, be too much augmented, or stop. Always add Opiates to things that ease Pains, which promote the Operation of Sudorificks.

If an Inflammation of the Womb arise from the Suppression of the *Lochia*, it must be quickly cured. To this end he commends emollient and carminative Clysters, and Sweats of Crabs Eye *Antimonium diaphoreticum*, and Opiates. He is also for emollient and aromack Fomentations boiled in Water and applied with Sponge, Linen Cloths or a Bladder. In this Case he bleeds the Arm or Foot, as he sees occasion. If the Inflammation yield not to these Remedies, he promotes Suppuration by Emollients, adding the Bulbs. of white Lilies and Onions, first roasted and bruised. Where the Heat is great, he boils them in Butter-milk; and if the Pains are very violent, in Sweet Milk. Where Wind is the Cause he gives carminative and emollient Clysters, made of Boys Urine which dissolves Wind, by reason of the volatil Salt in the Urine. He commends Mixtures of Oyl of Aniseeds, Amber, Mace, Orange Peel, Caraway, Cumin, Fennel, Juniper, &c. not neglecting *Opium*. He hinders the breeding of Wind afresh by Medicines that alter glutinous Phlegm; and

he offends he gives Cholerics and Subacids, especially Nitre. If after-pains from any sharp Humors, must be corrected and eva-

§. 23.

our Judgment after pains must be cured by removing the cause, mitigating the Symptoms, and by recruiting the placental animal Spirits. If after-pains be caused by a retention of the *Lochia*, things must be given to procure them, the extravasated Blood stagnating and putrefie; in which case decoctions of Myrrh, *elixir pro-*
simp. &c. are proper. It may be let in the Foot. If the retention of the *Lochia* be gross and sharp and serous, then it must be corrected by conve-
nient Medicines; as with Opiats and Astringents mixt. Here is a

of Powder of Crabs Eyes, and Blood each one Drachm, *Stimulium diaphoreticum* one scruple, *Laudanum Opiatum*, *Seriacæ celestis*, two Grains. Mix them. Divide it into three equal Parts.

after-pains come from excessive inflammation of the Parts, then divers Vulneraries, Juice of Marsh-mallows and its Decoction are proper. The Pain is abated by Opiats and by Emollients, as with the like Mixture;

Take of Water of Penny-royal, Fenil each two Ounces, Treacle simple six Drachms, Crabs Eyes two Scruples, *Laudanum Opiatum* three Grains, Trochiscs of Myrrh one Scruple, Syrup of Mugwort six Drachms. Mix them. Or;

Take of Essence of Myrrh two Drachms, Castor, *Essentia Anodyna* each one Drachm. Mix them. The Dose is twenty Drops. Or;

Take of Saffron half a Scruple, Mace one Scruple, *Tryphera magna* half an Ounce. Give it at twice in warm Wine.

Divers Aromatics also are good. I have several times cured after-pains with half a Drachm of Zedoary Powder. Old Cock or young Capon Broth is good the three first Days. Externally Emollients are good. Our Women commend blew Paper spread with Deer's Marrow or Linseed Oyl, and applied to the *Abdomen*. Bags and Fomentations, made of Carminatives, Emollients, Anodynes, and Discutients are good.

This following will not be improper;

Take of Seed of Millet, Cummin, common Salt each an Handful and an half. Fry them in a Pan. Put them in two Bags, and apply them to the Navil.

This also is good.

Take of Bay-berries one Ounce and an half, Root of Marsh-mallow
T t t

mallow one Ounce, *Calamus aromaticus* two Drachms, Boyl them in a sufficient quantity of Spring Water. Add some Fat of Capons and Goose. Mix them. Make a Cataplasim; Or;

Take of Fat of Bever one Drachm, destilled Oyl of Spike half a Scruple, Amber, Cummin, *Angelica* each six Drops. Mix them.

If after Pains come from an Inflammation of the Womb, then use *Sylvius* his Method.

If from Wind, use Carminatives, and lay a Plaster to the Belly. This following is *Cra-to's*.

Take two or three Onions boyled a little. Bruise them. Add Powder of Cummin, Chamomil Flowers bruised each one handful, Barly Flour what is sufficient. A little Flour of Linseed also may be added.

Some commend the drinking one Ounce of Chamomil Flower Water, and the applying of Pelitory Leaves fryed with Oyl of Rue to the Belly frequently.

Sennertus commends *Species diacymini* and *diagalangæ* for after-Pains.

Forestus uses a Decoction of Chamomil Flowers in Beer.

§. 24. Cure of the *Sto-Lochia*.

THE *Galensis* bring the *Lochia* again by forcing Medicines and such as open the Veins of the Womb. To which they give emollient, laxative and aperient Clysters. They rub Thighs downwards, make dole sick Ligatures upon the To apply Cupping-Glasses to Groins and Hips, and they bleed in the Foot. Inwardly they give aperient Decoctions, with Clove namon and Cicers. *Riverius* uses this following;

Take of the opening Roots each two Drachms, Leaves of Betony, Endive, Maiden-hair each one Handful, *Schoenanth* Pugil, Seed of Anise, Fenugreek each one Scruple, red Cinnamon Spoonful. Boyl them to a Pint and an half. Add to it Colature of Cinnamon Water two Drachms, Syrup of Marshmallows three Ounces. Mix them. Give four Ounces twice a day.

Before the Fever increases, give a Drachm of Trochiscs of Myrrh in White-wine or Rhenish Water. He says also, that for eight days after Delivery a Purge will be good of Infusion of Rhubarb, Agarick or Senega with a loosening Broth made of aperient Herbs and Roots of *Senna*, or an Ounce and an half of *Manna* dissolved in Broth.

§. 25.

Opus cures the Stoppage of the *Lochia* from external by giving Medicines pre- which dissolve coagulated or Blood in the Womb; are all aromattick and volatiles, especially Uterines; also joyns Sudorificks, that may do the Business the soon. To this end he commends that provoke the Menfes. as soon as a Fever arises, for of the *Lochia*, he earnestly is not to be over busie with aromatticks, lest we increase the fever. But he rather advises the use of Acids with Aromatticks, as Rhenish Vinegar, *Aqua Amstelredamensis alexipharmaca* or *procatartica*, Salt of Vitriol, &c. especially if Crabs eyes, *Antimonium diaphoreticum* and the like, which dissolve coagulated Blood, added to these Mixtures. If it have been stopt several days, Cure will be difficult. In Case he orders Bleeding, and others. He says that Fomentations and Ointments are good, applied to the Belly.

§. 26.

We have three Indications of Cure. 1. To remove the Causes of the Obstruction. 2. To mitigate the symptoms. 3. To comfort the weak Spirit and the Strength. If it proceed from want of Blood, it may be cured with analeptick and. If from concrete and stasies of Blood, caused by an excess of *Sperma Ceti*, mixt with

Aborbents will be good;

Take of *Sperma Ceti* one Drachm, Crabs Eyes half a Drachm, white Amber one Scruple, Castor half a Scruple. Mix them. Make a Powder, to be taken at twice in some proper Vehicle.

The following Mixture will be very proper, when there is a Grumescence of Blood from external Cold, and consequently a Suppression of the *Lochia*. *Ettmuller* cured several with it;

Take of *Aqua carminativa*, *Hirundinum cum castoreo*, Water of Bawm each one Ounce, *Antimonium Diaphoreticum* half a Drachm, *Sperma Ceti* one Drachm, Syrup of Cinnamon half an Ounce. Mix them. Let the Lying-in Woman take two or three Spoonfuls now and then.

Here volatil Oily Salts are good, and all things that are good against the Suppression of the Menfes.

If the Stoppage proceed from Pain, then Opiats with Medicines of Myrrh and other Aborbents are good, especially Crabs Eyes. So in a Disorder of the animal Spirits Cinnabarines mixt with Opiats are proper.

If it proceed from viscous Phlegm, obstructing the Vessels, then Aromatticks, things endued with a volatil Salt, and other gentle Aperients are proper: for Instance;

T t t 2

Take

Take of Water of Motherwort, *Carduus benedictus* each one Ounce and an half, Essence of Myrrh three Drachms, Venice *Borax* one Drachm, volatil Salt of Harts horn nine Grains, Syrup of Mugwort six Drachms. Mix them.

Let the Patient take of this Mixture two or three Spoonfuls often, and lay her self to sweat. For Sudorifics are very good, inasmuch as they incide a Viscid and correct an Acid.

For inciding a viscid Blood it will be proper to give the following Mixture by Spoonfuls;

Take of Water of Chervil, Motherwort each one Ounce and an half, sharp Wine Vinegar six Drachms, Crabs Eyes prepared one Drachm, diaphoretick Antimony one Scruple, Syrup of Mugwort half an Ounce. Mix them. Or;

Take of Spirit of Secundine three Drachms, *aqua hamagoga* three Ounces, Syrup of Cinnamon six Drachms. Mix and give it by Spoonfuls.

Essence of Myrrh is also good made with tartarificate Spirit of Wine. And so is Tincture of the *Scorie* of Antimony. A Decoction of Chamomil Flowers and Orange Pill in Beer, often cures, at least gives Ease.

If cleansing do not succeed, a Decoction of red-Cicers with Cinnamon is an excellent Medicine: for it comforts the plattick

Spirit and expels retained Impurities.

If from Compression of the *Faces* or Tumors, the Tumor must be asswaged, and a Clyster given.

If from a Plethory, you may bleed in the *Saphena*.

Among Externals I would commend the following applied to the *hypogastrick Region*;

Take of Oyl of Wall-flowers half an Ounce, detilled Oyl of Cummin, Juniper each one Drachm, Amber half a Drachm. Mix and use it.

Take of Leaves of Wormwood Flowers of Chamomil each three Handfuls, Motherwort two Handfuls, Root of Angelica one Ounce and an half, four greater cold Seeds each two Drachms, Juniper Berries two Ounces. Mix them for Bag.

Also *Emplastrum de balsamo lauri*, applied to the *Hypogastrum* will be good.

And since the obstructed *Lochia* may reitagnate into the Mass of Blood, and infect it with a Virulence (for the Particles that come from a cadaverous thing, may hugely taint the Blood) a dangerous, yea, a malignant Fever may be occasioned thereby. Wherefore you must guard warily to work, and cause the *Lochia* to return, and add things that resist Putrefaction, and balsamick Alexipharmacks, concerning which you may look in *Fever*.

§. 27.

Long empirical Medicines *Miscellaneus* reckons Juice of Bor-
age Apples and Parsley given to
Child-bed Woman with
and Oyl of Sweet Al-

28. Cure of Flood-

THE Cause of Flooding, ac-
cording to the *Galenists*,
consists in the checking of it.
They give great Caution, that
over Astringion we cause not
Diseases; therefore we must
use gentle ones. The
must be incrassating, the
Water, wherein Steel or
has been quenched. After-
wards they advise things that
the Revolution of the Blood
wards, as Frictions and Liga-
tures of the upper parts, Cupping-
to the Breasts and each *Hypochondrium*. They say also the
must be swathed because
the Vessels are compressed
the Immoderate Flux stopt;
they also advise to apply Linen
to the Loyns, dipt in Oxy-
gene. If Flooding endanger Life,
they have recourse to more effe-
ctual things, as to Opiats, and di-
verse Powders, and other Forms
Medicines, which you may
find in other Hæmorrhages. Ex-
ternally they apply divers Cata-
plasm and Unguents: as;

Take of Unguentum comitisse
two Ounces, Juice of Plantain
one Ounce. Mix them.

An Injection of Plantain Juice
into the Womb is commended by
Galen. This following is com-
mended by *Riverius*;

Take of the purest Soot of the
Chimney eight Ounces, mix
it with strong Vinegar. Make a
Cataplasm, and apply it to the
Reins.

If these and Opiats will not do
they fly to Venesection, as to the
last, but a present Remedy.

§. 29.

Paracelsus, *Helmout*, and
Willis do in this Case ad-
vise divers Astringents and Speci-
ficks, before mentioned in other
Hæmorrhages.

§. 30.

Plinius in violent Flooding
caused by Unskilfulness or
Rashness and Hast of the Midwife
in taking away the after-burthen,
advises divers gentle astringent
Vulneraries, such as Tormentil,
Bistort, all the *Consolida*, Myrtle,
St. John's Wort, Coral, *terra si-
gillata*, all Boles, Dragons Blood,
Bloodstone, &c. He relies much
upon the following Mixture in
this and all other Hæmorrhages;

Take of Water of Plantain one
Ounce and an half, *antiepilep-
tic. Amstelod.* distilled Vine-
gar each half an Ounce, Blood-
stone half a Scruple, red Coral
prepared one Scruple, *Lauda-
num Opiatum* two Grains,
Syrup of Myrtle one Ounce.

Ttt 3

Mix

Mix them. Let the Lying-in Woman take a spoonful of this mixture, shaking it first.

Or she may take the following Decoction;

Take of root of Tormentil, Bistort, each two Drachms, leaves of Comfrey, Sanicle, Winter green, tops of St. John's wort each one handful. Boyl them in steel Water. In twenty Ounces of the Colature dissolve of *Syrupus de Symphyto Fernelii* three Ounces, *aqua Antepileptica*, or *Hystericæ Amstelod.* six Drachms. Mix them. Let the Patient drink about three Ounces of this Decoction twice or thrice a day, till the Flooding cease.

Opiats may verywell be added to these things. When they will do no good he's for bleeding in the Arm, to divert the Blood from the Womb. He applies divers external Astringents both to the Belly and Back, as *Unguentum Martiatum*, *Populeum*, *Astringens Fernelii*, *Aureum*, *refrigerans Galeni*, *Emplastrum ad Rupturam*, Oyl of St. John's wort, water Lily, Roses, Maltich, &c.

Flooding, that proceeds from too great Laxity, may be cured by Astringents, and gentle Aromatics.

That which comes from an over thin and Serous Blood, may be cured by Hydragogues and gentle Sudorifics.

If Flooding proceed from Food, Physick or Poyson, or if the Blood be thinned, with drinking Spirit of Wine, it must be tempered with

Medicines that are Austere and Watry, with grateful Emulsion well made with barley Water and Almonds, adding Anodynes, and sometimes Opiats. For what purpose he commends the following Decoction;

Take of leaves of Mallow, Housle Night-shade each one handful. Seed of Plantain, Sorrel each two Drachms, Columbine three Drachms, white Poppy ten Drachms. Boyl them in steel Water. In twenty Ounces of the Colature, dissolve of *Syrupus de Purslain* two Ounces and half, Spirit of Salt ten drops. The Patient may take three Ounces of this Decoction several times in a day.

He says, the *Lochia* turn black by plenty of a sharp Acid, mix with them, and by lying long on the Womb, which makes the stink; then Aromatics, and things that abound with a volatil Salt, are proper. The Blood is pale by reason of much serum, or Phlegm mixt with it.

§. 31.

THE Cure of Flooding in Judgment, differs little or nothing from the Cure of the excessive *Menses*, which you may see. Here we shall only add a few things.

If Flooding proceed from a Plethora, we let Blood.

If from thinness or sharpness of Blood, we correct it with this, or the like mixture.

Take

of Water of young Harts-horn three Ounces, juice of Quinces one Ounce, red Coral prepared one Drachm, Blood-rose prepared half a Drachm, *Calenum opiatum* two Grains, Syrup of Raspberry six Drachms. Mix them. The Patient may take one or two spoonfuls of this mixture once an hour. Or in form of a Powder;

of burnt Harts-horn one Drachm, *terra sigillata*, Blood-rose each half a Drachm, *Laudanum Opiatum* one Grain. Mix them. Make a Powder for use. Or in form of an Electuary;

of old conserve of Roses one Ounce, *diacydonii sine spec.* half an Ounce, *trochisci de carabe*, *terra sigillata*, burnt Harts-horn each two Scruples, Syrup of Quinces what is sufficient. Make an Electuary.

If a piece of the After-burthen remain behind, and it cause a Flooding, then this will be proper;

of root of Bistort two Ounces, leaves of Majoran, Penny-royal each one handful, boyl them in Water and white Wine what is sufficient. To twenty Ounces of the Colature, add of Syrup of Mugwort two Ounces, Cinnamon water half an Ounce. Mix them. Let the Patient take three Ounces of this Decoction twice or thrice a day. And give the following Powder;

Take of burnt Harts-horn two Scruples, Bloodstone, Cinnamon, Saffron, *borax* each one Scruple. Mix them; make a Powder for twice.

If Flooding proceed from a too great Dilaceration of the Uterine Vessels, divers gentle Astringent Vulneraries will be proper.

Externally in any Flooding a Cataplasim of Soot and Vinegar is good to apply to the Loyns. Or the following Fomentation may be applied to the *Hypogastrium*;

Take of Flowers of Elder, Chamomil, red Roses, red Poppy, Primrose each one Pugil, leaves of Cinque-foil one handful and an half, root of Bistort, Tormentil each three Drachms. Shred and bruise them, boyl them in red Wine. Apply it to the *Pudenda*, and repeat it often.

Several other Astringent Liniments and Plasters, mentioned in other places, may be applied. A Linen-cloth dipt in Frog-spawn Water, may be applied to the *Pubes*; and the Loyns may be Anoynted with *Unguentum Santalinum*, *Rosaceum*, *infrigidans Galeni*, &c.

Among empirical Medicines, *Joh. Agricola* for Flooding, commends *oleum vini*, with true tincture of Coral. *Lovyse Bourgois* gives the Yolk of an Egg in red Wine. *Jo. Hartmannus* takes fresh leaves of black Hellebore, bruises them a little, makes a Girdle, and ties it about the naked Body. *Valleriola* gives one Drachm

of *Philonium Persicum* in juice of Plantain, and he never found a better Medicine: Externally he commends *Unguentum Comitisse*, with juice of Plantain. *Arnoldus Weikardus* cries up the virtues of Trochiscs of Amber, made with opium. *Gotfrid. in lib. obstetric.* Communicates these following: Conserve of Flowers of *Lysimachia*, or a Drachm of the Flowers in Powder is excellent to stop all Fluxes of Blood. *Pag. 508.* Let Pessaries be made of Cotton, dipt in juice of Horse-tail and Plantain, and strew some Powder of bole Armenick, or Flowers of *Lysimachia*. Put them into the Womb, and keep them a while there.

§. 32. Cure of a Milk Fever.

THE Cure of a Milk Fever is usually committed to Nature, and as long as the *Lochia* come well, this Milk Fever goes off well without Physick, generally in plentiful Sweat. In these Fevers therefore Diaphoreticks are proper, and often do the business; especially if this proceed from the obstruction of the Milk-Vessels. Therefore if the Breasts be swelled with curdled Milk, the following Aromatick and Spirituous Externals will be proper;

Take of the best Spirit of Wine one Ounce, Sal Ammoniack one Drachm, Water of Elder Flowers three Ounces. Mix them, and apply it with clean Cloths. A Plaster of *Sperma ceti*, and Hemlock will be good. When;

upon Weaning a Child, Milk should be wasted, this lowering will be proper;

Take of Parsly, Cummin, and Riander Seed each half an Ounce. Boyl them in a sufficient quantity of distilled Vinegar and Water. Give it.

The Milk also may be drawn first, by the Nurse, or a young Whelp, or by a Glas; or it may be milked upon the Coals or Iron, which, according to *Hermunt*, dries up the Milk. Or may lay Chervil fried in Butter, a Plaster of Wax and Bole, to the Breasts.

§. 33.

THE Ancients in these Fevers prescribe Mitigaters, and if the strength will bear it, a gentle Purge of Cassia, Manna, or Tamarinds. If there be a *Pleurora*, they bleed in the Foot. For food they allow of Barly Cream, or Water in which Cinnamon and Tamarind have been boyled.

I shall take the rest of the Cause about Milk out of *Sylvius*, who is as good as all.

§. 34. Cure

34. *Cure of Hardness of the Glands in the Breasts, and want of Milk from thence.*

THE Hardness of the Glands, and want of Milk thereupon (especially if it come from austere juice and Grief) by both inwardly and outward Medicines, that abound with a volatil Salt, and Spirituous Aromatics. Among Internals he commands Waters destilled from Aromatick Plants, with Spirit of Wine, which must be mixt with Water of Fenil, Bawin, adding concent Syrups, volatil Salts, Aromatick Oyls, and sometimes *Laudanum Opium*. And these Aromatick waters mixt with a volatil Salt, may be outwardly applied with Spirits to the Breasts. So Aromatick ointments and Oyls are proper. It is good also to chafe the Breasts with Volatil Salts correct an acrid Humor. But when the Vessels, which lead to the Breasts are too small, scarce ever is cured, or very slowly by frequent and gentle rubbing the place, by which the Blood is made to pass to the Breasts, with excellent Ointments and Oyls, as *unguentum Althææ*, *Mucagium Nervinum*, Oyl of white sweet Almonds, Mans Fat and other Creatures. If the Ferment in the Glands of the Breasts be dull, it may be cured with the foresaid Aromatick and Spirituous things, abounding in a volatil Salt.

If cold occasion want of Milk, he advises Sweats.

If loss of Blood, he orders it to be stoppt.

§. 35. *Cure of too much Milk.*

WHEN a Lying-in Woman is troubled with too much Milk, and it is occasioned by a laudable, thin and fluid Blood, it must be made viscid, and she must forbear all Food that is Spirituous, and abound with a volatil Salt, and take things that breed a thick and glutinous juice, such as very juicy Vegetables, Plantain, Purslain, Brooklime, Pears, Quinces, Medlars, &c.

If a plentiful and spirituous lactiferous Ferment occasion it, she must take things to dull and fix the Acid, such as all things that are Fat, Glutinous, Bitter, Watry, and lixivious, fixt Salts.

Cure of depraved Milk.

MILK is depraved, when it is faulty in any Quality.

A yellow Milk is produced by a Tincture of Bile abounding in the Blood, and is corrected by purging the Bile at Intervals. Vitriol corrects its excessive Tincture, especially made of *Mars*, and its Anodyne Sulphur.

A very white Milk from a Phlegmatick Blood is cured by correcting the Phlegm with Aromaticks and volatil Salts, and by Phlegmagogues.

A bitter

A bitter Milk produced by Bile is corrected as the yellow.

A salt Milk is cured by carrying off the salt *Serum* from the Blood.

A thick one must be incided by Aromaticks and volatil Salts.

A thin Milk must be thickned by a prudent and constant use of austere things, mixt with Food.

§. 36. *Cure of curdled Milk.*

THE Milk coagulated by an Acid, is cured by abstaining for the future from Acids, and from using any volatil Salts. Terror and Grief of mind must be avoided. If an Ague-Fit curdle the Milk, he orders Medicines that abound with a volatil Salt, such as *aqua vita Matthioli*, *theriacalis simplex*; but in this Case he commends distilled Oyl of Cloves above all. Externally Mint, Majoran, and Rue may be applied.

He commends a Plaster of *Sperma Ceti*, applied to the Breasts which dissolves any Coagulation.

When the Milk distends the Breast, causes Pain, and Inflammation, and threatens Suppuration, then he advises to use Aromaticks, both spirituuous and abounding with a volatil Salt.

But when by the Pricking in the Breast he finds Suppuration is begun, then Emollients must be joyned with Aromaticks, and and a Cataplasim of them applied to the Breast; among other things he advises two Onyons. Among Emollients he commends Roots of white Lilies, Marsh-mallow, Leaves

of Mallow, Powder of Line and Fenugreek, &c. In this case he condemns Repellents, for fear of a Gangrene. As soon therefore as Milk is turned to *pus*, which is known by the Abatement of the Pain, Hardness and Heat, unless the Apostem break of it self, it must presently be opened with a Lancet. When tender Women will not bear the Opening of that Part, lay a little *Basilicon* or roasted Figs to the Part; or sometimes a Potential Cautery when the *Pus* lies deep. When the Apostem is opened, and *Pus* begins to run, he puts some Balsam of Sulphur in the Orifice and lays either *Diapalma* or some Cataplasim upon it.

Cure of Inflammation of the Nipples and Breasts.

AN Inflammation of the Nipples and of the Parts of the Breast about them, arising from extravasated Blood, may be cured by emollient Cataplasms, and volatil Salts.

Heat of the Nipples and Excoriation may be cured with Water of Roses, Plantain, &c. with Mucilage of Quince Seeds and Gum Tragacanth, made with the foresaid Waters.

In Exulceration of the Nipples he commends any Balsam of Sulphur and Balsam of Peru.

Cure of an Erysipelas.

For an Erysipelas Chalk and Cream mixt together, and Water boyled with *Mercu- dulcis*, are proper. He also recommends Elder- Water.

If the running out of the Nipple, he advises a Lixivium of Lime.

For the chapping of the Nipples recommends Balsam of Peru and Wax.

37. Cure of curdling of the Milk by the Author.

WE would recommend to a Mother or Nurse taking some Aniseed or Fenil after every Meal, to keep the Milk from curdling. About thirty or forty Drops of Spirit of Sal Ammoniack in Chervil Water is good inwardly.

Externally a Bag of Rice and Nett, applied hot to the Breasts is good, or a Plaster of *Galbanum*, Saffron and Gum Ammoniack dissolved in Vinegar; or the Breasts may be chafed with this or the Spirit;

Mix of Spirit of Sal Ammoniack made with quick Lime one Ounce and an half, Essence of Saffron three Drachms. Mix them. Anoint the Breasts with a Feather.

This following also is excellent;

Take of Mucilage of white Lily and Marsh-mallow and a little Wax and make a *Sparadrap*.

If the Mother intend not to give Suck, that the Milk may not curdle in her Breasts, beside the foresaid things a Cataplasm of the Crumb of Ry-bread well leavened, made up with Powder of Mint, Salt and Rose-Vinegar, will be necessary. And if the Milk be over-thick and coagulated already, Parsly, Chickweed and Chervil will be proper. Or Crane's-Bill or Elder Flowers boyled in Butter, or only warmed, may be applied to the Breasts. Or they may be anointed thrice a day with the following Liniment.

Take of Hen's Grease, Ointment of Roses each one Ounce, Oyl of Violets half an Ounce. Mix them.

Or with fresh Butter and Spirit of Sal Ammoniack mixt together. Or a Plaster may be made of red Lead, Wax and Oyl of Roses. And *Sperma Ceti*, with a little Myrrh and Crabs Eyes may be given inwardly.

Cure of Want of Milk.

IN Want of Milk the things following are proper;

Take of Elder Flowers one Handful and an half, Milk one Quart. Boyl them.

A Decoction of Fenil is also good,

good, and of Elder Flowers, Or *Pulvis Diacrystalli Mynsichti*, or this following may be given;

Take of *Lac Lunæ*, prepared Crystal each one Ounce, destilled Oyl of Aniseed, Fenil each six Drops. Mix them. Make a Powder, and diuide it into six Doses.

If upon a sudden Fright or Anger a Woman find any great Alteration in her Milk, let it presently be milked out, and let her take the following Powder in a Draught of Chervil or *Carduus benedictus* Water.

Take of *Autimonium diaphoreticum* one Scruple, *Sperma Ceti* half a Drachm, Crabs Eyes six Grains. Mix them. Make a Powder for one Dose to cause a gentle Sweat.

If the Glands or Lactiferous Ducts be obstructed, all Diaphoreticks, Incisers, aromattick and spirituuous things are proper: As;

Take of Water of Penny-royal Bawm, Fenil each one Ounce, Spirit of Sal Ammoniack fifteen Drops, destilled Oyl of Mace, Amber each three Drops, Syrup of Fenil two Drachms. Mix them.

If by an Acid or Austere convulsively contracting the Ducts, the following Powder must be taken often every Day;

Take of Seed of Anise, Fenil each two Drachms, Coriander one

Drachm, Cinnamon, red Clove prepared, native Cinnamon Earth-Worms each one Scruple, white Sugar the Weight of them all. Mix them. Make a Powder. The Dose is one Drachm.

Aromatticks may be applied the Breasts outwardly. Sucking good.

Cure of Sore Nipples.

VHEN a Salt Milk causes Excoriation of the Nipples, things that correct salt Acrimony and Opiats are good as *Pilule de Cynoglossa*. Externally we use the following Elixirs;

Take of Water of Elder Flowers Scabious each one Ounce *Mercurius dulcis*, *Saccharum Saturni* each one Drachm Mix them. This Mixture may be applied warm to the Breasts.

When Milk corrupts and turns cadaverous, Sudorificks are good. Here is a Receipt;

Take of Water of Elder two Ounces, *aqua theriacalis camphorata* one Drachm, Crabs Eyes half a Drachm, volatile Salt of Harts-horn six Grains, Syrup of *Carduus benedictus* half an Ounce. Mix them.

Cure of an Erysipelas.

In Erysipelas arise in the Breasts with Heat and Cold, Swellings and pricking Pain in the Breasts, Diaphoreticks are proper for Instance;

Take of Water of *Carduus benedictus*, Elder-flowers each one Ounce, Mandible of a Pike, *Antimonium diaphoreticum* each half a Drachm, Syrup of Marsh-Mallows six Drachms. Mix.

Among Externals the Vulgar use is to spread the inner Rind of Elder Flower, or Chamomil flowers with Vinegar and apply it hot to the Breasts. Elder Water would be better; for moist things do more harm as the Vulgar think, if they be but applied hot. They are not for moist things may be Elder Flowers sprinkled with Vinegar of Wine, or the following

Take of Treacle one Ounce and half, Salt of Wormwood half a Drachm and an half. Mix.

Pulvis Erysipelatis Mynsieri, sprinkle it well with Vinegar of Wine, and apply

Cure of an Inflammation.

In an Inflammation a brown Paper spread with Virgin Honey may be applied, or a Cataplasim of Bean-flower, boyled in Oxycrate.

In an Inflammation with great Pain in the Breasts, the following Cataplasim will be proper;

Take of Root of Marsh-Mallow, Parsly each one Ounce, Leaves of Marsh-Mallow, Hops, Dill, Hyssop each half a Handful, Flowers of Elder, St. John's Wort each two Pugils, Rape Oyl by Expression one Ounce (or beat the dry Seed very fine.) Boyl them in a Sufficient Quantity of Butter-Milk. Make a Cataplasim and apply it to the Breast affected and repeat it often, unless the Patient cannot endure fat things.

In a schirrhous Tumor, *Emplastrum diachylon magnum* and Gum Ammoniack dissolved in Vinegar is proper. *Emplastrum de Ranis cum Mercurio* is excellent in this case.

If a Tumor, Pain, and Hardness in the Breasts supervene, and you fear an Inflammation, give the following Powder. I have hitherto found it successful;

Take of Harts-horn prepared without Fire one Scruple, *Antimonium diaphoreticum* half a Scruple, volatil Salt of Vipers

Vipers five Grains. Let the Patient take it in a sufficient Quantity of Elder-flower Water.

If the Nipples are chapt, so as that a sharp *Serum* ouzes out, this following will be good.

Take of Leaves of Betony, Speedwell, green *Origanum* each what you please, fresh Butter what is sufficient, a little Rhenish Wine. Boyl them to the Consumption of the Juices, then strain them through a Linen Cloth.

In these Chappings, the following Liniment will be proper;

Take of Hen's Grease, Turpentine each two Drachms, Gum Tragacanth half a Drachm, Galls three Drachms, a little Wax with a sufficient Quantity of Oyl of Roses make a Liniment.

Abscess.

AN Abscess is very difficult to cure. We shall only recommend what *Sylvius* has experienced.

Among empirical Medicines take these following.

Cunrad Kunrath medull. destillat. commends the following Plaster for drying up the Milk.

Take of Ry-Bread a sufficient Quantity, Salt half as much, Boylthem in water into the form of a Cataplasm, which must be applied hot to the Breasts, and often repeated.

In abundance of Milk *Hi Mercurialis* orders the Breasts be washed in Vinegar. He orders the Application of Broth and Vinegar wherein Cummin is boiled: Or;

Take of Seed of Fleawort, *anacardus castus* each two Drachms Cummin one Drachm and half, *alumen scissile* two Scruples. Boyl them to a fourth always stirring them.

Ludovicus Mercatus found this always very beneficial, which is made of an Equal quantity of fresh Butter and Turpentine washed in Wine and Rose Water. He says also that Oyl, in which Radish thin sliced has been boyled a long time, is of great Moment. *Pulverinus* commends a Plaster made of three Eggs, Scruple of Saffron, and Wax what is sufficient. *Varignana* counts it a Secret to anoint the Nipples with juice of Plantain.

In the curdling of the Milk *Aëtius* commends this following;

Take of Wax one Ounce, Pearls one Ounce and an half, Oyl of *Sesamum* one Drachm. Mix them.

Rodericus à Castro says, that Garden Parsly bruised and laid to the Breast is good. Others commend *mentha crispa*, bruised and applied to the Breasts, and often renewed. *Dodonaus* highly commends Hare's Rumet applied with a little Vinegar and Butter.

or some Oyl for dissol-
coagulated Milk. *Henr. ab*
gives Calves Runnet and
dissolved in Vinegar and
Water. *Jos. Quercetan*

commends Rew bruised with
Vinegar, and applied to the
Rivers, when all o-
ther things fail, commends a
Mixture of prepared *Millepe-*
taken in Broth for two

Defect of Milk *Joh. Agrico-*
commends the Liquor of Flints.
Phil. Grulingius commends Milk boyled
in Barley: his Wife
it. *Phil. Grulingius* com-
mends this;

of Seed of Meadow Trefoil,
Sesamum, Fenil, Poppy,
each half an Ounce. Mix
them. Make a Powder.
The Dose is a Drachm with
Wine, or a Decoction of red
Clovers.

Herlicius magnifies *Confectio*
Seminis Carvi. *Joel* commends
this following;

Take of Seed of Fenil, Anise,
Parsnip each half an Ounce,
Line one Drachm, Cinnamon
two Drachms, Sugar-candy
one Ounce and an half. Make
a Powder, the Dose is a
Drachm and an half Morning
and Evening in Wine.

Joh. Stokerus highly com-
mends Linden Tree flowers boy-
led in Milk. *Thurnhauserus* com-
mends Oyl of Root of *Cretan*
daucus to be drank. *Varigna-*
na found Lettuce, boyled in Bar-
ley Water admirable. *Marc. An-*
tonius Zimara highly values a
Drachm of the Hoofs of the
Fore-Fet of Kine burnt to Pow-
der, and taken in Broth or Wine.

C H A P. IX.

Of the Green-Sickness.

§. 1.

THIS Disease is called *Chlorosis* from *Χλωρός*, a whitish Green. It is also called *Febris alba*, *Morbus Virgineus*, *pallidi Virginum colores*, and *Icterus albus*, from its likeness to a Jaundice. It is a sort of *Leucophlegmatia*. It is generally described to be, *A vitious Habit of the Body, arising from Obstructions of the Veins of the Liver, Spleen and Mesentery, but especially of those about the Womb, with a dulness in the Limbs, Palpitation of the Heart, Shortness of Breath, Appetite to absurd things, &c.* It might better in my Opinion be described thus, *It is an Uterine Disease, produced by the Oppression of the Plastick Spirit, and the Thickness and Acidity of the Blood, obstructing the Capillary Vessels of the Womb, with a Dulness of animal Spirits.*

This Disease is much of the same Nature with a *Leucophlegmatia*, *Cachexy*, and *Longing*, and is almost under the same Cause and Cure.

§. 2. Part affected.

THE Subject by the general Consent of Authors is reckoned to be the Womb, with the rest of the Bowels where Obstructions can be made.

§. 3. Diagnostick.

NOW we must show, how the Enemy may be discovered invading the Plastick Spirit. The Colour of the Face and whole Body is Pale and Whitish, and sometimes Leadens, Livid and Green. It is usually attended with a Swelling and Inflation of the *Hypochondria*, a spontaneous Lassitude of the whole Body, the Legs swell especially about the Ankles, the Body looks soft and flabby, they cannot go up a Pair of Stairs, or stir, but they are out of Breath; they have usually a Palpitation of the Heart, with a Pulsation of the Temporal Arteries the Pulse is sometimes so quick, that they seem to be in a Fever, and therefore it is called *Febris alba*, they have a dull and lasting Head ach, they are very

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§.
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and dull about every thing, by Reason of a depraved Acid Stomach, they sometimes lose their Victuals and long for strange things, and then generally their *Menses* are stopt. They are very thirsty, they are troubled with Belching, the Belly swells with Meal, they have a Rumbling in their Guts, are Squeamish and generally Costive. All their Excretions are crude and phlegmatic. They are ordinarily cold, when they have a Flushing, which they often have. By these you need not doubt of the disease.

§. 4. Cause.

THE old *Galenists* do here blame Obstructions of all Veins, especially of those about the Womb, which are caused by thick, viscid and crude Humors, usually of a bad Diet. You may see several Authors in the History of *Leucophlegmatia* and many.

§. 5.

Our Opinion the Green-Sickness arises from Phlegm a little too acid, and oftentimes from gross and corrupt Liquor proceeding from the vaginal Glands of the Womb, disturbing the Motion of the Mass of Blood, and pressing the plastick Spirit upon the whole Mass of Blood, as in Fermentation, and sometimes sharp, as may appear in the Symptoms which make the Countenance look as Pale as Death. Swelling and Inflation of

the *Hypochondria* in this Disease do frequently arise from Wind raised by a vitious Gas, which distends the Cavities of the *Abdomen*, and by forcing the Diaphragm upwards cause, shortness of Breath, which is increased by Exercise, because then the Humours grow hotter, and dilate and rarefie, and so make all worse.

A spontaneous Lassitude of the whole Body arises from the *Torpor* of the Plastick Spirit, and from the Paucity and Viscidity of the animal Spirits, which stick in the Mire of the Womb, and cannot extricate themselves, and therefore are insufficient for much Exercise. Lassitude may also arise from the Obstruction of several Nerves in the Muscles all the Body over, so that few animal Spirits can get into them, and so the Limbs are unable to stir. If there be velleitation, as sometime there is, there must be some Acrimony in the gross Blood which occasions it.

Pain of the Stomach and depraved Appetite proceed from a viscid Acid, and from the Weight and unusual roughness of absurd Aliments.

Maids are often tormented with Rumbling in their Guts, because they lace themselves too strait, and so by a violent Compression shut the Pores of the Body, and pen up the Wind.

§. 6.

EXternal Causes are, taking cold in their whole Body, but especially in their Hands or Feet, Intemperance in Meat, Eating absurd things, Chalk, Rice, raw Turf, Crabs Eyes, dry Crusts of Bread, Nutmeg, Vinegar, Juice of Limons, Limons, Oranges and Summer Fruits, all which enervate the Ferment of the Stomach and other Parts. Excess in Sleep and Rest, Grief, Stoppage of Excretions, Costiveness, and Suppression of the *Menses* cause it: and sometimes it is Hereditary.

§. 7. Prognostick.

IT is no dangerous Disease, when it has not been of any long Continuance: for when it is grown inveterate, it may prove the Cause of several Diseases, as Dropsies, Barrenness, &c. The Aphorism of Hippocrates Sect. 5. 36. may have reference to this place; *When a Woman's Menses are discoloured, and come not in the same Measure, nor at a certain time, it indicates that Purging is necessary.* There is great Hope of Recovery, when the *Menses* keep their constant times. and are right in Quantity and Quality. If it proceed from the Obstruction of the Veins of the Womb, then in young Maids it is cured by Marriage.

§. 8. Cure.

THE Galenists endeavour to open Obstructions by cutting and carrying off the Phlegm and by strengthening the Bowels. The things that open Obstructions you have before in Obstructions of other Parts. First they give a Clyster, and a gentle Purge. Then they let Blood if the Disease be young and the Maid sanguine. Then they give opening and purging Apozemes and when they have done Purging they use Bathing as the last Remedy. And lastly they strengthen the decayed Members.

§. 9.

IF you would have *Our Cure* this is it. You must endeavour to excite the animal Spirits, to correct the acid viscid Humors, to carry them off when corrected, and to take care of the Stomach. And to begin with cleaning the first Ways; if there be an acid Locum in the Stomach, you must safely give a gentle Vomit; if the Patient be against Vomiting, give purging Pills, especially made with Gums, adding Saffron, triol, fixt Salts, *Mercurius dulcis*, &c. I have given the following Physick with Success;

Take of Leaves of Bawm, Rosemary, Penny-royal, Nep each half an Handful, Root of Ecampane, *aristolochia rotunda*, Angelica, Bryony each two Drachms,

drachms, Leaves of *Senna* one Ounce, Root of black Elebore prepared two drachms, white Agarick half an Ounce, Orange Peel, Seed of Cardamom, *Daucus* of Crete each one Drachm, Filings of Steel in a Cloth one Ounce, *Cassia Lignea* two drachms. Bruise and break them, and put them into a Bag for a Measure of white Rhenish Wine. The Dose is three ounces, when there is occasion, a day.

All things are good here, as we mentioned in the Description of the *Menses*, especially these Medicines. I have cured the Green-Sickness with this Steel alone;

of Essence, or Extract of Cloves one Ounce, *Cassia Lignea* two Drachms, choice Cinnamon one Drachm and an Ounce, Cloves one Drachm, Rhenish or Sack one Quart. Let them stand in Digestion in a warm Place for two days; then strain it through Hippocrates his Sleeve. The Dose is one Ounce.

Orto commends the following Electuary;

of Filings of Steel prepared with Vinegar six Ounces, Cinnamon, candied Nutmeg each three Drachms, Rhubarb two Drachms, *Species aromatica rosata* two Drachms, Honey and Sugar each one Ounce and an Ounce. Mix them. Make an Electuary.

Riverius cured several Maids and Women of the Green-Sickness by the use of *Pulvis cachecticus*. And *Sennertus* holds that Steel is one of the best Medicines.

§. 10.

IN this Disease you must for some time continue giving inciding, attenuating and opening things, volatil and fixt Salts, aromatick Oyls, and mineral Powders will be proper, adding Stomachicks and Uterines. The following or some such Mixture may be given by Spoonfuls;

Take of Water of Mint, Orange Peel or Rosemary, or Majoran each two Ounces, *Aqua Vita Matthioli*, or *Spiritus carminativus Sylvii* one Ounce, *Antimonium diaphoreticum* half a Drachm, Spirit of Sal Ammoniack twenty Grains, some aromatick or carminative Oyl six Drops, Syrup of Mint one Ounce. Mix them.

For taking away the ill Colour, *Peter Johannes Faber* commends Quintessence of Nep.

All bitter things are good, such as Tincture of Wormwood, lesser Centaury, Scurvy-grass-Water, Agrimony and *Elixir proprietatis*. Here all things are proper also, which imbibe and sweeten a viscid Acid, and strengthen the Plastick Spirit. The following Powder will be useful for that Purpose;

Take of *acidum tartari Mynsichti*, Crabs Eyes, *Crocus Martis* each one Scruple, Oyl of Cloves

Cloves four Drops. Mix them for three Doses. Give one every Morning and Evening.

When the Humors are corrected and evacuated, the Reliques must be thrown off by Sweat, by Internals; and if they will not do, by Stoves, Baths, Frictions, &c.

The Inwards, and the Stomach especially, must be strengthened both by Internals and Externals. If it proceed from too small Veins, and the Patient Venerical, advise Marriage.

Lud. Mercatus, when the Spleen being obstructed causes

the Green-Sickness, commends an Oyntment of Elstridge's Fat. He also recommends to melancholick Women Bezoar and *Scorzonera* Root, infused all Night and drunk in the Morning.

Joh. Varandæus commends the following Pills;

Take of Juice of *Mercury*, clarified Honey each one Ounce boyl them to a sufficient Consistency. Add of Roman *Nigella* powdered three Drachms. Make a Mass; and make one Drachm into six Pills. Let her take two going to Bed, for three days.

CHAP

C H A P. X.

Of a Furor Uterinus, and Women's Melancholy.

§. 1.

Among other strange Symptoms, which afflict the Female Sex, a *Furor Uterinus* is one, which may very well be called *Nymphomania*, *Crupifinus Fœminarum*, *Melancholia Mulierum*, *Uteri Delirium*, &c.

Description.

This Disease is commonly thus described, viz. *An immoderate Desire of Venery, making Women almost mad, proceeding from abundance, Acrimony, and a peculiar Quality of Seed,* in my Opinion rather, *A Delirium, with fierceness and madness, but especially with a unnatural desire of Venery, arising from a Turgescentcy of animal Spirits in the Parts allotted to Venereal Actions, and engaging the plastick Spirit.*

§. 2. *Part affected.*

IN these Diseases the Brain and animal Spirits are affected by Consent with the genital Parts and the Womb. For the Reason why they are delirious, is because the genital Parts about the Womb are continually irritated. So that while they think and talk of nothing but Venery, they go quite besides themselves. Young Widows and Maids of a hot and melancholick Complexion are chiefly subject to this Disease.

§. 3. *Diagnostick.*

ALTHOUGH this Disease, when inveterate, need no Signs, as being easie to be known by Dotage, and Discourse, which tell it; yet one beginning is very Latent in modest Women, and cannot be known but by a Prudent Conjecture. However you may know it by Sadness, Silence, Tears, a small, weak and slow Pulse, and now and then quick, that is, if there happen to be any Discourse of Love, or a handsome young Man. So you may guess

at it by down-looking, swollen, rolling, and sparkling Eyes, a sudden alteration from sadness, at the mentioning of Venereal Matters, by bursting into Laughter upon it, blushing and then turning Pale. When the Disease grows worse, they can scarce forbear immodest Speeches and Actions. They talk disorderly of those they Love, they Frisk and Dance, and shew by their Gestures, what it is that troubles them. They embrace Men, kiss them, behave themselves impudently, and like Melancholists, fancy strange things to themselves.

§. 4. Cause.

THE Galenists say, that in this Disease, the Seed matures and acquires a Malignant quality, which occasions these Symptoms. Some of them blame the Acrimony and Turgescence of Seed, which provoke excessively to *Venus*. They give several external Causes, which are Provocatives.

§. 5.

WE think, that the Plat tick Spirits about the genital parts, make such an impression upon the Brain, and do so open its pores, that there appear no other *Idea* but those of Lust. Now the Causes, which irritate the Plat tick Spirit, are Youth, bilious Constitution, the abundance and Acrimony, especially of the genital Humor in the Cervical Glands, whether Salt or Acid, and Plenty of Spirits by reason whereof they are incited to

Venus. The external Causes, a hot and dry Air; hot, salt, sharp, acid, and aromattick things, Diureticks and Menagogues. Long Watching and an idle Life may contribute for;

Otia si tollas, periere cupidinis arcus.

Remembrance of Venereal matters Toying, Dancing, feigned Courtship, and the like.

§. 6. Prognostick.

THIS is a miserable Infirmary both because it can be but slowly cured, and it is a blot to honest Families: for they cannot well resist the titillation (yet sometimes the violence of the Disease is such, that before People they will invite Men to lye with them, and call Venereal matters by their broad Names.) And finally this Disease sometimes degenerates into a *mania cephalica*.

§. 7. Cure.

THE Galenists endeavour to take off the hot intemperature of the inwards, especially of the Womb, and also of the Blood and Seed. To this end, they Bleed, and give things gently to Purge Bile and Melancholy, they superadd juleps to prepare the Humors, and open moderately; afterwards they advise strong Purgers, which you may see in Madness. Then they give things to cool the Womb, and the whole Body. They commend Baths made of cooling things, such as Purslain, Lettuce, Water-Lily, Willow,

low, Roses, Violets, &c. They
the drinking of Whey. To
these they add things that have
a stick virtue to extinguish and
the Seed. All Refrigerants are
for it.

Corius commends the follow-
distilled Water ;

of leaves of Water-Lily, Wil-
ow, *agnus castus* each two
handfuls, Lettuce, Purslain, *Ve-*
nu-Navil each one handful, the
four cold Seeds ; Lettuce, white
Poppy each half an Ounce.
Bruise all fresh, and sprinkle juice
of Limons on them. Distil
them in *Balneo Marie*, and to
every pound of Water, add one
Drachm of Camphire.

Emulsions are usually made of
four Seeds, which are
more efficacy. They pre-
pare Opiates. They neglect not
sters and Injections into the
Womb.

Externally they apply cooling
iments to the Loins, *Pubes*, and
perineum, and they order a Plate
Lead to be worn continually
on the Loins. They make an
Injection into the Womb of Whey,
Barly water, with a little juice
of Night-shade, Houseleek or Hem-
lock.

Finally, they think all that is
lost in a *mania*, is good in this
case: for they say, the Brain must
be taken care of.

§. 8.

IN Our Opinion, the Cure must
be begun with the Regiment
of the Non-natural things. The
diet must either be, or be made,

Cool and Moist. The Food for a
time must be Watry and Insipid,
the Drink must be small. Sleep
must be procured, and Rest must
be ordered ; but so as not to exceed
bounds. Excretions must be pro-
moted. And the Mind, as far as
possible, must be diverted from
Venereal matters, and wanton dis-
course. On the contrary, they
must be perswaded by reason,
to keep within bounds of Mo-
desty.

When the Diet is thus ordered, if
Blood abound, Bleed, Correct and
Purge the sharp juices. For cor-
recting the sharp Humors, Watry,
Oily, Earthy and Narcotick Me-
dicines are good, as, Emulsions,
Juleps, Electuaries, Conserves, &c.
for instance ;

Take of Seed of Hemp one Ounce,
Lettuce, Purslain each one
Drachm, four greater cold Seeds
each one Scruple. With a suffi-
cient quantity of *Nymphaea-Wa-*
ter, make an Emulsion, and
sweeten it with Sugar of Roses.
Or,

Take of Water of Lettuce, Flowers
of water-Lily, Borrage or Bu-
gloss each six Ounces, *Sal pru-*
nella two Scruples. Mix them.
Make a Julep. Or,

Take of Flowers of Water-Lily,
Roses each one handful, leaves of
Lettuce, Purslain each two hand-
fuls, Seeds of *agnus castus*, Plan-
tain each three Drachms. Boil
them in Water. To twenty
Drachms of the Colature, add of
Cinnamon Water six Drachms,
Spirit of Nitre eighteen drops,
Syrup of Water-Lily two Oun-

ces. Mix them. Make an Apozem. Let the Patient drink three Ounces, twice or thrice a day.

Essentia castitatis, *Saccharum Saturni*, and Camphore are good Medicines; for example;

Take of *aqua castitatis* five Ounces, *Saccharum Saturni*, Crystal each one Scruple, *Syrupus Nymphaeae* one Ounce. Mix them. Take a spoonful often in a day.

Here also, to correct the vitious genital Liquor in the Glands of the Womb, and to strengthen the Glands, all catarrhal Balsamicks are good, such as Myrrh, Mastich, Frankincense, Camphore, Amber, &c. To evacuate the Humors, which are generally Serous, Hydragogues are good, such as Jalap, &c. and sometimes Cholagogues: for instance;

Take of Water of *Nymphaea* half an Ounce, *pulvis Catholicus purgans* one Scruple, Syrup of Water-Lily three Drachms. Mix and give it. Or,

Take of *Pilula de fumaria* one Scruple, Resin of Jalap four Grains, *Saccharum Saturni* four Grains. Mix them. Make Pills.

It is good, in this case, to put Coolers, such as Nitre, and *Sal Prunellae*, in Purges.

In the mean time, at Night Apodynes and Narcoticks may be prescribed of Treacle, Mithridate, *Diafscordium*, *Pilula de Strychno*, *Laudanum Opiatum*, &c.

The Womb must be cooled by cooling and astringent Injections made of leaves of Mallow, Marsh-Mallow, Water Lily, Savine, Lettuce, Purslain, Houfleeck, &c.

Baths of cold Water are good. And the Womb may be washed often in cold Water, wherein *Sal Prunellae*, and *Saccharum Saturni* have been dissolved.

The Loins may be Anointed with Oyntment and Oyl of Rose adding cooling juices and a little Camphire;

Take of *oleum Nymphaeae* one Ounce, Oyl of Rew three Drachms, *Saccharum Saturni* one Scruple. Mix them. With this Liniment, Anoint the Loins and Genitals.

A Pessary of *Emplastrum de cicuta* is good.

If none of these things will do, the Patient, if she may, must Marry a lusty Man. For it is but turning the Tables, and what advice the Poet gives Men, may be taken by Women. viz.

Uteris? Uxorem ducas, non expedit uri,
Conjugis in gremio mortificanda caro est.

BOOK VI.

Of Children's Diseases.

CHAP. I.

*What must be done in the Month, and afterwards
of their Diet and Education.*

§. I.

Certainly, if any one, our divine Hippocrates is Sollicitous for the Health of Children, in divers of his Aphorisms saying; *Such things befall Children new Born, Fluxes, Vomiting, Coughs, Scurving, Fear, Inflammation of the Navil, running of the Ears.* When they are Elder, and begin to shed Teeth, *Itching of the Gums, Fevers, Convulsions, Loosnesses,* trouble them most that breed their Eye-teeth, and such Children especially as are Gross, and Costive. When they are grown up a little; Irritations of the Tonfillæ and

Vertebræ inward, Asthma, Stone, Worms, Warts, Strumæ, and other Swellings, but especially the fore-said. When they are bigger, and near Pubescence. Many of these things, and tedious Fevers, and and bleeding at the Nose, and many Diseases are judged in Children, some in forty Days, some in seven Weeks, others in seven Years, some when they come to Pubescence, but such as remain, and terminate not at Pubescence in Boys, and when the Menstrua come in Girls, last all ones Life. And many Diseases more may be added, as you shall hereafter see.

§. 2. We

§. 2.

W^E will first consider, how a Child may be hurt in Nutrition by Milk. When the Midwife has done her Office to the Child, it is laid to the Breast, from whence it sucks Milk, for the first two Months, every two Hours; after three or four Months, every six hours; after six Months, twice or thrice a Day. When a Child has been thus suckled for a year or more, towards the latter end you must use it to Drink, till it is quite Weaned from Milk, though many Women suckle their Children two years; and some few, three. And while they do suckle them, they give them Pap of Wheat-flower, and Milk. This is the usual way of Nursing, in which several Diseases arise, so that we may truly say with wise *Solon; Man is Putrefaction in his Birth, A Bubble all his Life, Meat for Worms at his Death.* We will premise something concerning the Recrements, that are gathered by Children in their Formation and Nutrition in the Womb, by some called *Meconium*, which lie in their Guts, and unless this blackish green Excrement be timely voided, it often proves fatal to Children.

§. 3. Cause.

V^V^E Question not, but this Excrement has its Original from the Child's Nutrition, which the last days it takes by the Mouth, and when it is kept longer than it should it turns acid. Hence it is the Cause of the Gripes, Fits, and sometimes of the Jaundice. Therefore *Ettmuller* says, *Meconium* is nothing but a crude Cheese, sequestrated, and as it were precipitated, from the rest of the nutritive substance. For since it arises from a kind of Milky Nutriment of the Child in the Womb, which more or less retains the Acidity, which it has once contracted from the Stomach, when it meets with Bile in the Guts, they together turn into a dark greenish black Colour, and by tarrying long in the Guts, it bakes harder. Wherefore Physicians, Nature's Servants (since Nature in her ordinary Method does quickly, sometimes at the very Birth, evacuate these Excrements by Stool or Vomit) do very well, before the Child sucks or eats, in giving it Oyl of sweet Almonds, mixt with Manna, or with some Laxatives, either Syrup of Cichory with Rhubarb, or Syrup of Buckthorn made with Honey, adding Crab's Eyes, which *Ettmuller* highly commends, for evacuating the *Meconium*, that would turn sowre and curdle the Milk in the Childs Belly. Our good Women do give (and they do very well in it,) *pulvis Marshionis* or *pulvis cephalicus D. Michaelis*:

is : for they are of an
ing and precipitating Facul-
And because oftentimes Me-
cannot be had, therefore
ident Dame Nature, hath fur-
ed the Mother with a serous
(the *colostrum* or Beestings)
only a Medicamentous Ali-
ent, which for the first days
suckt by the Child, because
is Serous Saltnefs, Purges.
efore Mothers take no good
se with their Children, who
them to others to nurse,
pecially to such as have a thick
mold Milk. If therefore they
not purged by the Milk, give
the forefaid Purging and Im-
ing Medicines.

§. 4.

THE Mothers Milk is the most
natural Food for Children.
e and things sweetned with
ar, because they contain an
in them, are not proper for a
ll's ordinary Drink. A good
is white, Sweet in Taste, plea-
e in smell, and of a moderate
sistency. On the contrary
is bad, when it curdles and
sowre. If it is Yellow and
ter, it argues Bile; a Blackish
Blew denotes an Acid. So a
ump or Salt Milk is bad, arising
m the like *Serum*. But there
several insensible faults also, that
opl the Milk. For it has been
erved, that not only the morbid
atural qualities are communicated
the Nurses to the Children, but
m the Moral, as *Etmuller* and
y self have seen. Nay, brutal
properties and manners get with
e Milk into the Child, as it has
en observed in Children brought

up with Hind's or Goat's Milk. See
Reyes camp. elys. 9. 47. A bad
Milk may easily offend the tender
Fibres of a Child's Stomach, may
cause Gripes, a Loosness and seve-
ral other Ails. A Serous Milk,
Causes, Loosness, and Scabbiness,
a Caseous Milk, Costiveness,
want of Appetite and Vomiting;
a Yellow and Sharp Milk, Vomit-
ing and Loosness, and Pustles.

§. 5. Cure.

HOW Want of Milk may be
supplied, and its ill quali-
ties Corrected, we have observed
before in Diseases of the Breast. It
is sufficient to suckle a Child two
years at the most; and neither
Mother nor Nurse, when they
have Conceived, must give Suck,
but the Child must be weaned,
and used to solid Food. If the
Mother cannot give her Child
Suck, she must get a Nurse; but
if she be able, it is best for the
Mother to give her own Child
Suck. A Nurse must be of a good
Habit of Body, a middle Age, well
coloured, Honest, neither a Glu-
ton, nor Drunkard, one that has
born two Children at least, and
brought them up. She must not
be diseased, because the Nurse's
Diseases are communicated to the
Child. She must observe a good
Diet. Let her take especial care
of Purgers and Acids, which may
vellicate Children's tender Fibres
in their Stomachs, cause Gripes
and Convulsions. Wine and Spi-
rituous *Drinks* are naught for Nur-
ses. She must avoid an Intempe-
rate *Air*, immoderate Watching,
and too must Rest and Sleep. Her
Meat

Meat must be of good Juice, and easie Concoction; if the Nurse is a Country-Woman, her Meat must not be Dainty, for it is worse for her Stomach than her accustomed Food. She must forbear Cheefe, because it is apt to curdle the Milk in her Breasts, also Salt and Aromatick things, Pulse, Salt Fish, but especially Vinegar and Acids, which is often the occasion of Fits, as *Sylvius* has observed, and Beer not well boyled or wrought, because it spoys the Ferment of the Stomach, and Causes Looseness, and Gripes. Let her avoid all violent *Passions of the Mind*, for by disturbing the animal Spirits, the Nervous kind, and through their means the Mass of Blood, and the rest of the Humors in the Body, they alter, and by the same means corrupt the Milk: But especially let her avoid Fright and Anger; therefore her Domesticks must give her no occasion. *Etmuller* gives a notable instance of a Fright. He says, "A Child-bed Woman was 'heartily frightened', but presently 'as soon as she was come to her self, she made a Whelp draw her 'Breasts, lest the altered Milk 'might hurt the Child, presently 'the Whelp fell into Fits, but by 'giving it Treacle, after a long 'Sleep the Fits went off. I have seen three Examples. Anger is as bad. For both of them disturb Digestion. Nurses do ill in giving the Child Suck too often, for so they kill it with kindness. As to the *excreta* and *retenta* they must all be in order. Neither Nurses nor Women with Child must give Suck: for as often as a Nurse has her *Menfes*, an alteration may be found in the Child. But a strange

alteration is made in the Milk, when the Nurse is with Child: for the a corrupted Milk is bred, which makes a horrid impression on the Child. It turns to Cheefe in the Childs Stomach, which may make the Child rue it all its days. *Etmuller*, *Schockius*, and *Digby* give this as a Cause of several Men hating Cheefe. Therefore let such as give Suck keep from the Husbands.

§. 6.

NOW also we must say something of Children's Food. And the good Women should be admonished, who in the first Months, make Pap of Meal, Milk and Sugar, and feed their Children with it, which Pap, as *Etmuller* says, is fitter for a Book-binder to past his Books withal, than to eat. For it loads the Stomach, this spoys the first Concoction, and consequently the second and third. *Hildanus cent. 6. obs. 6.* observes a most dangerous obstruction of the *Pylorus* by such glewy Pap. Wherefore it is best the first four Months, for the Children to be content with the Mother's Milk only: Afterwards they may eat Broth. Nurses also do very ill by Children, in chewing their Victuals in their own Mouths, to soften it with the Spittle. Hereby several Diseases may be communicated to poor Children.

All Childrens Diseases proceed from an Acid, and a Viscid. The *Galatists* blame a Gross and Acid Phlegm. The *Paracelsists* an Acid Salt or Tartar. *Boerhaave* call it a *viscous Acid*. All Medicines therefore that correct this, are good in Children's

Children's Diseases, as all Alkalies,
Volatil and fixt, all Aromatizatus, Saline Volatils, especially
Spiritus salis Aromatizatus, Anisatus
Caryophyllatus, liquor cornu
succinatus, which are good
for the Nurse and the Child,
convenient Vehicle. Three or
four drops may be given in Water
Mint, Fenil, or in the Mother's
Milk. An Acid is also strangely
employed by Sharp, Aromatick,

volatil Salts, such as Aniseed, Castor,
Ec. Myrrh, Amber, and Native Cin-
nabar, imbibe an acid. Among fixt and
earthy things there are Crab's Eyes,
Coral, Pearl, Bezoar, Ivory, Fossil
Unicorn, pulvis Polychrestus Ett-
mulleri, who is as good as all in
his tr. de infant. valetud. where
all Children's Diseases are ingeni-
ously and truly derived from an
Acid. These are Generals, we
will descend to particulars.

CHAP.

C H A P. II.

Of the Jaundice.

§. 1.

Children not only after they are born, but when they are in the Womb are infected with the Jaundice. Yet it usually comes after the Child is born; it will continue a while, and then strike in again. It shows it self by the Skin's being as Yellow as Saffron, when not only the whole *superficies* of the Body, with the Whites of the Eyes; but the Fat, and fleshy parts, the Membranes, and *Parenchymata* are tinged. This Disease may sometimes be known by the Yellowness of the Urine, which turns Clothes Yellow, and by the Stools being White.

§. 2.

Sylvius thinks, in Children the Jaundice may often come, without the obstruction of the biliary Duct, that is, from the Spirituosity, and therefore ineptitude of the Bile to ferment.

We deduce the Cause of this Disease from Bile, or too many Sulphureous Particles in the Mass of Blood. Wherefore Children born of Mothers who give themselves to drink Spirituous and

Volatil things, to wit, Brandy, Sack, and such things, as soon as they are born, have the Jaundice. Without doubt therefore a volatil and sharp Bile, may cause the Jaundice, and I question not but it may proceed from an obstruction of the biliary Duct, by the *Mecconium*, or some viscid Humor.

§. 3. Cure.

IT may easily be cured, by using Lixivious, oylly Salts Internally and Externally. If the Belly be bound, it may be loosened with Syrup of Buckthorn, adding some Powder of Ivory; Or Syrup of Cichory with Rhubarb, or Rhubarb, and other convenient things may be put in the Nurses Drink. Afterwards things may be given to incide, and open the Choledochal Duct. Every day some drops of tincture of Saffron, or a Grain of Saffron in Substance may be given. For all things of Saffron are good. So are Sudorifics: Sylvius commends a Grain of *Bezoarticum minerale*. Externally divers things, mentioned in the Jaundice, will be proper.

§. 4. Chil-

§. 4.

Children about four days after they are Born, have a Purple effluence all over their Skin, with Itching, and a little Excoriation.

§. 5.

THE Cause is, because the Childs Blood in the Mothers Womb, is often tainted with the Mothers Scorbutick Blood, which on the approach of the external Air, received by respiration, ferments too high. And by this internal Motion the immiscible Salts are driven off to the circumference, especially to the Intercutaneous Glands, where they show themselves by Itching.

§. 6.

THE Cure of this Disease consists chiefly in procuring Transpiration. Therefore the good Women wash the Body in warm Wine, and by gentle rubbing, open the Pores of the Skin, at which these Heterogeneous Salts, and morbid Seeds, may be discharged; and so likewise the Viscosity, acquired in the Womb, and obstructing the Pores, may be washed off. To this purpose, some use a little Soap, that they may wash the cleaner. So much for prevention. If the Disease be troublesome, several Sudorifick Alkalies must be given. In this Case also a Grain of volatile Salt, inwardly will be proper; and so will a Grain of *Antimonium Diaphoreticum*.

C H A P. III.

Of Children's Gripes.

§. I.

GRIPES are very familiar to new born Children, which not only proceed from the Curdling of the Nurſes Milk, but from either Wind or Humors peccant in an acid Acrimony. It is a ſign of Wind, when the Belly is very much ſwelled, and when they are relieved by breaking Wind. The Signs of an Acid are, beſides their Crying, Stools either Green, tinged by an Acid, and corrupted, or Yellow, and after a while turning Green, and ſmelling Sowre.

§. 2. Cauſe.

THE Gripes come upon young Children, from the bad Diet either of the Mother or Nurſe, to wit, when they feed upon Meat that is apt to breed a viſcous Acid, or upon high ſeaſoned Meats, which encrease Acrimony of the Bile, or upon Sawces, that are apt to breed an acid Humor.

§. 3. Cure.

Theſe things premixed, the Cure may eaſily be performed, which conſiſts in diſcuſſing of

Wind, and in the Correcting and Carrying off the Cauſes. Among things that diſcuſs Wind, I deſerve to value *aqua carminativa Myſichti*, Water of Zedoary, Aniſe Mint, Fenil, adding a drop or two of *Spiritus Anticolicus ex Nitro D. Michaelis*, or *Spiritus Nitri dulcis*. for inſtance;

Take of *Aqua Carminativa*, Water of Fenil; Mint each one Ounce, *Spiritus Nitri dulcis* fix Drops, *theriaca caeleſtis* three Grains, *Effentia Citrifaccharini Zwelferi* what is ſufficient. Mix them. Give a ſpoonful of the mixture.

If inſtead of Spirit of Nitre, one would uſe volatil Spirit of Sal Armoniack, or any other Spirit Aromatized, he might.

When the matter is both Glutinous and Sharp, we muſt always have an Eye upon Wind, which muſt be diſcuſſed with carminative Clyſters. *Ettmuller* in this Caſe gives ſome Powder of Aniſeed with half Coral, or *Eleoſaccharum Aniſi*, or *Spiritus ſalis Armoniaci volatilis aniſatus*. Gripes cauſed by Wind are alſo ſtopt with Opiates, ſuch as Syrup of Poppy, or *Laudanum Opiatum* added to Carminative mixtures, as there ſhall

the occasion. Externally also
in Case several things will be
such as destilled Oyl of
Fenil, Caraway, Aniseed,
peel, mixt with boyled Oyls
Worms, Castor, also *Oleum*
mativum Myrsichti, *Em-*
um de baccis Lauri, applyed
over the Belly. Bags filled
Carminative Herbs may be
applied to the Belly.

When a Glutinous matter is the
cutters of Phlegm are good,
are generally the foremen-
Carminatives. When these
have been given, the
matter must be carried off,
Syrup of Cichory with
herb, of Peach-flowers, Roses
with Senna, sharpened
a little Resin of Jalap. But
Children cannot bear Purg-
the Nurse must take a large
that the virtue of the Pur-
may with the Milk be com-
municated to the Children. If the
be swelled with Wind, and
the glutinous Matter besides,
will be best to give a Clyster
for Purgings. Externally you
use the following Oynt-

of Gum Ammoniack half
Ounce, Turpentine three
Ounces, Aloes, Myrrh each
Drachm, Ox's Gall one
scruple. Mix them. With
Suet make an Unguent
of due consistence.

When an acid Acrimony is joyn-
with the foresaid Wind, or
alone, the Cure of the
will consist, 1. In re-
moving all the external Causes.
2. In Correcting the Acid in the

Mother or Nurse. 3. In Correcting
the Acid in the Child.

External Causes must be re-
moved; such as acid Food, Sawces,
or Physick, used immoderately
by the Mother or Nurse. The
Passions of the Mind must be avoid-
ed, Grief, Fear, and Anger. For
if any such thing happen, the
Breast must be drawn, before the
Child suck.

The Acid may be Corrected by
Spirituos and Oily things, and
by fixt and volatil Salts, whether
manifest or latent in Coral, Pearl,
Crabs-Eyes, &c.

And to discharge this Acid, when
Corrected, Aromatick Diureticks
are good. This same Acid also is
is corrected and expelled by
Sweat.

To temper the Acid in the Child,
which frets the Guts, Absorbents
and Precipitants are proper. *Pulvis*
specificus Ettmulleri rarely fails in
this Case;

Take of Crabs-Eyes prepared half
a Drachm, Harts-horn prepared
without Fire one Scruple, red
Coral prepared half a Scruple,
red Myrrh, Castor each five
Grains, *theriacal celestis* four
Grains. Mix them. Make a
fine Powder. The Dose is from
half a Scruple to a Scruple.

If you fear the Gripes may
put the Child into Fits, as they
often do, then volatil Salts will be
proper. The following or some
such mixture may be given by
spoonfuls;

Take of Water of Flowers of Lin-
den-tree, Fenil each one Ounce,
Spiritus salis Ammoniaci ani-
satus
X x x

sarus half a Drachm, Crabs-Eyes prepared one Scruple, Native Cinnabar half a Scruple, *theriaca caelestis* three Grains, Syrup of Mint half an Ounce. Mix them.

Or give the following Powder;

Take of *pulvis Marchionis* one Scruple, *aurum fulminans* three Grains, depurated Nitre two Grains. Make a Powder. Divide it into four equal parts. Or,

Take of *pulvis Absorbens Wedelii* one Scruple, Cinnabar of Antimony seven Grains, Castor pre-

pared six Grains, *theriaca caelestis* two Grains. The Dose from half a Scruple to five Grains.

In this Disease I have with good success given *pulvis absorbens Ledovici* and *Wedelii*. Opiates are sometimes sufficient. *Theriaca caelestis* or Mithridate may with little Cotton, be put into the Navil.

Externally the foresaid Carnative and Aromatick Oyls are proper.

These said Medicines may also be given in green Stools, which proceed from a preternatural Acid.

C H A P. IV.

Belching, Hiccough, Nauseousness, Heart-burn, Vomiting, but especially of Curdling of the Milk.

§. 1.

Children new born have often disaffected Stomachs, whence come Belching, Hiccough, Nauseousness, Heart-burn, and several sorts of Vomiting. No wonder, if a great deal of an acid, tough *Mucus* which may easily be bred of corrupt Milk, create trouble to the Stomach, and when this *Mucus* ments, it turns to Wind, no wonder if there be Belching: but it turn not to Wind, and cleave the Orifice of the Stomach, it must needs by its Acrimony, velli- and corrode those nervous parts, and so cause the Heart-burn. If the *Mucus* pass not by the *Pylorus*, the Appetite must needs be destroyed. If the Stomach be irritated and spasmodically contracted, Vomiting must needs ensue, which sometimes does the good, especially if it Vomits green *Mucus*.

§. 2.

Hiccoughing is caused by Milk corrupted and coagulated by an Acid, especially if an acid *Mucus* stick to the upper Orifice of the Stomach, because of the sensible Nerves. Hereupon, by reason of its firm Connexion with the Diaphragm, this convulsive Contraction is caused, which they call the *Hiccough*.

§. 3. Cause.

FOR the most part therefore it is an acid Acrimony, which irritates the upper Orifice of the Stomach, and draws the Diaphragm into consent.

§. 4.

And since Belching, Vomiting, Hiccough, Nauseousness, and Heart-burn, differ little in their Causes, so with a very small alteration, they require the same Cure; namely things that dispel Wind, cure Belching, such as the Carminatives mentioned in the foregoing Chapter.

324 Of Belching, Hiccough, Nauseousness, &c.

In a Heart burn arising from a Sharp, viscid Humor, sticking to the Mouth of the Stomach, all that corrects that viscid Acrimony is good, especially *essentia carminativa Wedelii*, mixt with essence of Castor, of *Opium*, internal and external Carminatives, and strengthening Nervines. I have often given the following Powder, with good success in mint Water. For Mint and its Water is *Sylvius* his Specifick in the Hiccough;

Take of Powder of Nutmeg half a Drachm, Crabs-Eyes prepared one Scruple, Castor half a Scruple, red Coral prepared, Cloves each one Scruple, distilled Oyl of Mint two Grains, *theriaca caelestis* three Grains. Mix them. Make a subtil Powder. The Dose is half a Scruple.

Those that are Elder may take now and then a spoonful of the following mixture;

Take of Water of Mint two Ounces, Cinnamon one Ounce, tincture of Amber one Scruple, *essentia Anodyna* half a Drachm, Syrup of Mint two Drachms. Mix them.

If the Contraction of the Stomach be great, and Fits be feared, then we must have recourse to Cinnabarines and Opiates; in which case the following Powder is famous;

Take of Cinnabar of Antimony two Grains, *aurum fulminans*, *theriaca caelestis* each one Grain. Mix them for a Dose. Or give the quantity of a Pea

of Mithridate or Venice-Treacle.

Sylvius in Childrens Nauseousness and Vomiting commends *Spiritus nitri dulcis*, and Opiates. To the Elder he gives, for the Hiccough, a Vomit. Then he gives *pulvis Foëlis*, highly valued by *Ettmuller* in the Hiccough. It is made of Harts-horn and prepared Coral, adding a drop or two of distilled Oyl of Cinnamon or Aniseed. He commends Aniseeds for elder Peoples Hiccough externally and internally, and Castor likewise. If the Vomit be Idiopathick, and there be a Nauseousness and Shortness of Breath, it must not be stopt, until the peccant Matter be thrown off. When that is done, the Stomach must be strengthened with the following Balsamick mixture;

Take of Cinnamon Water one Ounce and an half, Spirit of Mastich one Drachm, Essence of *terra Japonica* one Scruple, Syrup of Cinnamon half an Ounce. Mix them take a spoonful, now and then.

This Powder is *Ettmuller's*;

Take of Nutmeg one Drachm, red Coral, Cloves each half a Drachm. Mix them. Give a little at a time.

He values Treacle inwardly and outwardly. And for such as are weaned half a Drachm of Cloves, and two Scruples of Mastich boyled in Wine. I look upon this as an useful Medicine in all these Cases;

Take

of *pulvis Bezoardicus* one Drachm, Crabs-Eyes prepared, Cinabar of Antimony each one Scruple, Castor half a Scruple, *theriaca cœlestis* four Grains, distilled Oyl of Cinnamon, distilled Oyl of Mint each one drop. Mix them. The Dose is from five Grains to ten.

For want of Appetite, I first give a vomit, and then *Sal volatile Cinamomifatum* with Essence of *Stem of Peru*; or *terra Catechu*, adding some drops of Oyl of Cinnamon, or Mint, or Mace or some aromatick distilled Oyl.

In all these Diseases externals are used; Liniments, Oyls, Plasters, cloths, and Spirituous things may be applied to the Stomach and Belly. Here my external Balsamick mixture of Chocolate, *Contra Alkermes*, Oyl of Nutmeg, *Stem of Peru*, Cinnamon and Clove is excellent. *Oleum Stomacum Cratonis*, Oyl of Mint, Clove, Cinnamon, &c. also a Cerebrum of *Laudanum* and *Tacamahaca* will be good. And Spirituous things, such as Spirit of Mint, Clove, Lily Conval, *theriacalis*

camphoratus, &c. Bread dipt in Sack, and sprinkled with Oyl of Mace or Cinnamon, applied to the Stomach is good. In Vomiting Opiates, such as *theriaca cœlestis*, may be put into the Navil, or a Plaster of Treacle may be applied. If the Excrements be variegated, Clysters give great relief. Our red Plaster applied to the Belly is good in all these cases;

Take of Gum *Tacamahaca* one Ounce and an half, Myrrh six Drachms, Mastich two Drachms, Powder of red Saunders one Ounce and an half, red Roses half an Ounce, Oyl of Nutmeg by expression two Drachms, Mastich, Wormwood each what is sufficient, Wax what is sufficient. Boyl them to the consistence of a Plaster.

Emplastrum de crusta panis may be mixt with Oyl of Mastich, and a Cataplasim of sowre Leven, and Powder of Mint, red Roses, Frankincense, Mastich and Rose Vinegar is good; or a bag of Appropriate Herbs. You may see more *L. 1. Cap. 3.*

C H A P. V.

Of Looseness and Costiveness.

§. I.

NOT only Children's Stomachs, but their Guts likewise are out of order, sometimes being Loose, and sometimes Costive. Children are generally troubled with Loosenesses about the time they breed their Teeth; and if a Looseness turn to the Bloody-Flux, it proves generally Fatal.

§. 2. Cause.

A Looseness proceeds either from some fault in the Milk, or from Corruption of Food, or from some sharp Matter gathered in the Guts. Costiveness arises from a tough Matter, which is also Austere, and contracts the Guts.

§. 3. Cure of a Looseness.

THE cure of a Looseness consists in the above-said Stomachicks. At first Abitergents are good, as a decoction of Bark with Syrup of Roses Solutive, and astringent Balsamicks both inwardly and outwardly. Here all Cathartives, Theriacals, Inbibers, Bezoardicks, Opiates, &c. are proper. This following is excellent to remove the Pains and Convulsions of the Guts, and to stop a Looseness, or to take off the Acrimony.

Take of *essentia theriacalis* one Drachm, *Anodyna* half a Scruple, Balsam of *Peru* one Scruple. Mix them. The Dose is a few drops, according to the Age of the Patient, and the urgency of the Symptoms.

Magistery of Coral with Citron juice, Ivory prepared without Fire, Nutmeg, Mastich, *Aqua Cinnamomi Cydoniata*, Syrup of Coral.

of dried Roses, Spirit of
Mastic, *theriaca Andromachi*
celestis, and *Laudanum O-*
cydoniatum Hoffmani
excellent Medicines: for in-

of Water of Plantain one
Ounce, *Aqua Cinnamomi Cy-*
doniata half an Ounce, Sy-
rup of Coral one Ounce, Spirit
of Mastic one Drachm. Mix
them.

of Magistery of Coral, with
Citron juice, Ivory prepared
without Fire each one Drachm,
Terra Catechu one Scruple.
Mix them for several times
taking.

Externally Oyl of Quinces,
Mastic, Myrtle, Nutmeg by
distillation, *Unguentum Com-*
positum, and the abovesaid Cata-
plassms and Plasters, are pro

4. Cause of Costiveness.

Children are bound because
either of a tough Paste,
which dulls the sense, because
the flows not to the Guts,
which should be the *Stimulus*;
or of an Austere, either in the
digestive juice or in the

§. 5. Cure of Costiveness.

Costiveness in Children is
cured by Lenitives, which
must be given both to the Nurse
and the Child. The Nurse may
take Broth with leaves of Senna,
and Aniseeds boyled in it. The
Child may take a Clyster of sweet
Milk, with Turpentine, and Yolks
of Eggs dissolved in it. If the
obstruction be pertinacious, I use
to put in a little *aqua benedicta*,
and then give Manna in Broth.
If the matter be Viscid, and the
Child elder, I give as many Grains
of Powder of Jalap in Syrup, as
the Child is years old: Or I give a
Pill of *Pilula Angelica* or *Aloë-*
tica, or according to *Ettmuller*,
Syrup of Buckthorn alone, or
mixt with Syrup of Fumitory.
For Children that are weaned,
he advises some Grains of *Mer-*
curius dulcis, which dissolves the
Mucus, and kills Worms; a
Grain or two may be given in
Milk or Pap. I usually give a
spoonful or two of the following
Potion according to the Nature of
the Disease and the Age;

Take of leaves of Senna one
Drachm and an half, Seeds of
Anise, Fenil each one Drachm,
Acid of Tartar half a Drachm.
Infuse them a night in Mallow
or Mercury Water. Boyl them
in the Morning on a gentle Fire.
In three Ounces of the Colature
dissolve one Ounce and an half
of Manna. Strain it again,
and add of Syrup of Cichory
X x x 4 with

In a Heart burn arising from a Sharp, viscid Humor, sticking to the Mouth of the Stomach, all that corrects that viscid Acrimony is good, especially *essentia carminativa Wedelii*, mixt with essence of Castor, of *Opium*, internal and external Carminatives, and strengthening Nervines. I have often given the following Powder, with good success in mint Water. For Mint and its Water is *Sylvius* his Specifick in the Hiccough;

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Those that are Elder may take now and then a spoonful of the following mixture;

Take of Water of Mint two Ounces, Cinnamon one Ounce, tincture of Amber one Scruple, *essentia Anodyna* half a Drachm, Syrup of Mint two Drachms. Mix them.

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THE cure of a Looseness consists in the above-said Stomachicks. At first Abstergents are good, as a decoction of Bark with Syrup of Roses Solutive, and astringent Balsamicks both inwardly and outwardly. Here all Cathartives, Theriacals, Inbibere Bezoardicks, Opiates, &c. are proper. This following is excellent to remove the Pains and Convulsions of the Guts, and to stop a Looseness, or to take off the Acrimony.

Take of *essentia theriacalis* one Drachm, *Anodyna* half a Scruple, Balsam of *Peru* one Scruple. Mix them. The Dose is a few drops, according to the Age of the Patient, and the urgency of the Symptoms.

Magistery of Coral with Citron juice, Ivory prepared without Fire, Nutmeg, Mastich, *Aqua Cinnamomi Cydoniata*, Syrup of Coral.

of dried Roses, Spirit of
theriaca Andromachi
celestis, and *Laudanum O-*
cydoniatum Hoffmani
 excellent Medicines: for in-

of Water of Plantain one
 Ounce, *Aqua Cinnamomi Cy-*
doniata half an Ounce, Sy-
 rup of Coral one Ounce, Spirit
 of Mastic one Drachm. Mix
 them.

of Magistery of Coral, with
 Citron juice, Ivory prepared
 without Fire each one Drachm,
Terra Catechu one Scruple.
 Mix them for several times
 taking.

Externally Oyl of Quinces,
 which, Myrtle, Nutmeg by
 infusion, *Unguentum Comi-*
ssum, and the abovesaid Cata-
 racts and Plaisters, are pro

4. Cause of Costiveness.

Children are bound because
 either of a tough Paste,
 which dulls the sense, because
 it flows not to the Guts;
 which should be the *Stimulus*;
 or of an Austere, either in the
 creatick juice or in the

§. 5. Cure of Costiveness.

Costiveness in Children is
 cured by Lenitives, which
 must be given both to the Nurse
 and the Child. The Nurse may
 take Broth with leaves of Senna,
 and Aniseeds boyled in it. The
 Child may take a Clyster of sweet
 Milk, with Turpentine, and Yolks
 of Eggs dissolved in it. If the
 obstruction be pertinacious, I use
 to put in a little *aqua benedicta*,
 and then give Manna in Broth.
 If the matter be Viscid, and the
 Child elder, I give as many Grains
 of Powder of Jalap in Syrup, as
 the Child is years old: Or I give a
 Pill of *Pilula Angelica* or *Aloë-*
tica, or according to *Ettmuller*,
 Syrup of Buckthron alone, or
 mixt with Syrup of Fumitory.
 For Children that are weaned,
 he advises some Grains of *Mer-*
curius dulcis, which dissolves the
Mucus, and kills Worms; a
 Grain or two may be given in
 Milk or Pap. I usually give a
 spoonful or two of the following
 Potion according to the Nature of
 the Disease and the Age;

Take of leaves of Senna one
 Drachm and an half, Seeds of
 Anise, Fenil each one Drachm,
 Acid of Tartar half a Drachm.
 Infuse them a night in Mallow
 or Mercury Water. Boyl them
 in the Morning on a gentle Fire.
 In three Ounces of the Colature
 dissolve one Ounce and an half
 of Manna. Strain it again,
 and add of Syrup of Cichory

℞ x x 4

with

with Rhubarb six Drachms,
Powder of Jalap half a Scruple.
Mix them.

Outwardly the Belly and Navil
may be anoynted with warm Oyl
of Chamomil, wherein a little
Coloquintida has been boyled,
or the Belly may be anoynted
with *Unguentum de Arthanita*,
which I have often found success
by. Goose or Hen's Grease,
applied with the outer rind of
Walnuts is good; or Suppositories

may be made of Honey with
biera picra; or a Fig fastned to
thred may be thrust up the *In-*
testinum rectum. If you would
have a Liniment. This or some
such may be made;

Take of *Unguentum de Arthanita*
two Drachms, Ox's Gall in
spissated one Drachm, Aloe
half a Drachm, Oyl of Colo-
quintida half a Scruple. Mix
them. Make a Liniment.

CHAP

C H A P. VI.

Of a Thrush.

§. I.

A Thrush, which is vulgarly, but erroneously, held to be Ulcers, in some light Eschars, that arise in the heads of certain Pustules in the Mouth, fall off and come again, of divers Colours, and with various Accidents. Sometimes it comes in one part of the Mouth, sometimes in another, and sometimes in the Oesophagus, Stomach, Guts, and the *Aspera Arteria*. It is of various Colours, whereof Sylvius de Aphthis gives a reason, and derives it from Bile, mixed with an Acid in a different manner. Some Thrushes are soft and moist, others harsh and dry; some stick lightly to the parts, and fall off easily, others stick fast, and are removed with difficulty; some are confluent, others distinct.

§. 2. Diagnostick and Cause.

A Thrush is easie to be seen, sometimes like a crust, it makes as it were but one Ulcer, fretting the Cuticle, but not consuming the Flesh, as other Ulcers do. It begins at the Gums, afterwards it creeps to the Tongue,

Palate, all over the Mouth and Jaws, and by the Continuity of the Coat runs quite down the *Oesophagus*, Stomach and Guts. Children get it by the Corruption of the Milk, and an Acrimony and Acefcence ensuing upon it, which frets and excoriates the Membranes of the foresaid parts. Some blame an acid *Lympha*. But the foundation of the peccant Acid is in the Stomach, from the Corruption of the Milk. *Etzmüller* thinks, that the Acidity exhales from the Stomach, and these sharp Vapors, while they stick to the Parts, or are mingled with the *Saliva*, do by their Acrimony raise Pustules, like Eschars raised by Art. It sometimes (though rarely) proceeds from Agues, and more frequently from continual Fevers, and other Diseases, when Crude, Porraceous recrements ly in the Stomach.

§. 3. Prognostick.

THE event is various, according to the variety of the Thrush and its Causes. A sharp, Symptomack Thrush is bad, a Critical one is better. It is a good one, that comes presently, and takes up but little room, if it be dispersed only here and there, if it be white, soft and moist, if it fall off

off in washing, tho it comes again, if it diminish the Disease, if it be attended with Salivation; for usually it goes away with Salivation. On the contrary that is bad, which is Livid, or Yellow, or Black, or Dry, which gives no relief, which runs all into one, and which augments the Disease.

§. 4. Cure.

THE Cure consists in correcting the Acid, in hindring it from breeding anew, in ripening and healing it. The Yolk of an Egg mixt with Rose-water and Sugar-Candy, strangely corrects the Acid in a Thrush. The juice of Turneps laid to a Thrush, with a little Honey or Sugar does the same. Juice of Crey-fish, and Speedwel is good. This that follows, seldom fails me, wherewith every day once or twice I rub the Mouth, with an Instrument wrapt in a Cloth;

Take one Yolk of an Egg, of clarified Honey two Drachms, juice of Speedwel, Turneps each half an Ounce, Saffron six Grains, Mace half a Scrup'e,

Water of Speedwel and Roses each what is sufficient.

Fresh Beer, Whey, Beer altered with Figs and Liquorice, and Syrup of Jujubes are good to wash the Mouth. A Decoction of Speedwel, oleous and mucilaginous things, such as *Psyllium* and Quinces, must be given between whiles, with Honey or Water, wherein Steel has been quenched, and Sage and Honey boyled.

You must take a care of Sharp things, especially Acid and Salt, Spirit of Vitriol, Sulphur, Salt, Nitre, &c. which do a Thrush much harm. We must not be forward to purge in this Disease, because a Loosness might follow, which is very bad. Therefore a Stool may be procured by a Fig. Then the gentle Sudorifick following may be given;

Take of *Bezoardicum Minerale* from one Grain to five, Bezoar stone from three Grains to seven, Saffron from two Grains to six. Mix them. Make a Powder.

C H A P. VII.

Of Fits.

§. 1.

THE falling Sickneſs in grown Perſons has great Affinity with Fits in Children, only with this Difference, Children have it by Sympathy with the Stomach and Guts. And both in the Stomach and Guts an Acid is the Cauſe, as the ruginous, porraceous and black Excrements do teſtifie. Sometimes Worms, ſometimes Teeth, are the Cauſe; and oftentimes before the coming out of the Small Pox or Meaſles, Children have Fits.

§. 2. *Prognostick.*

WHEN Children yawn and ſtretch often, have a Quivering in their Eyes and Eye-lids, when their Hands ſhake, their Arms extend, when they ſtart and tremble, and when they wake too much, Fits may be feared. If Fits be dangerous in grown Perſons, without doubt they will be ſo in Children, when Froth appears about the Mouth, and when they ſhriek much. And they that in the Fit hold their Breath, or void their Excrements

involuntarily, and after the Fit are much changed, do dy.

§. 3. *Cure.*

THE Cure of the Fits in Children conſiſts in a due Regulation of the Non-naturals, eſpecially of the Meat and Drink. Nothing corruptible muſt be given, as Milk-meats, which are apt to curdle on the Stomach.

On the contrary their Meat muſt be of a good Juice; Pap therefore may be made of Broth and Bread, without any Fat or Salt. The drink muſt be Barly Water boyled with Aniſeed, Liquorice and ſuch things.

If you ſuſpect an Acid, then a kindly Purge and a gentle Vomit will be good. Or a Clyſter of Whey and Honey, or a Suppoſitory may be given of a Candle, Venice Soap, red Beet, or a Parſly Stalk, &c.

Afterwards all things are good that imbibe an Acid, viz. Foſſil and Sea Unicorn, *Bezoar*, *Pulvis Marchionis*, Harts-horn, Man's Skull, Coral, Elks Hoof, *Maggiſterium Lune*, and a thouſand other things. *Cinnabarines* exalted with *Laudanum Opiatum*, or ſome Anodyne, are good; or joyned with

with Precipitants. This is an excellent Powder following;

Take of Cinnabar of Antimony, Man's Skull prepared, Elks Hoof prepared each half a Drachm, Powder of the Heart and Lungs of a Mole two Scruples, *Bezoardicum Lunæ*, Emerald each one Scruple, Saffron half a Scruple, Amber-grise two Grains. Mix them.

Cinnabar of Antimony imbued well with *Clyffus* made of Antimony and Sulphur is accounted a great *Arcanum* in Fits.

Ettmuller magnifies the Meal found upon Clubmoss, because it is of a Sulphureous Nature and takes fire and cracks like Gun-Powder. Half a Scruple may be given. I have tried half a Scruple of Earth-Worms dried and powdered in a convenient Vehicle, and Ashes of a Mole, and have had good Success. Or such a Powder may be given;

Take of humane Secundine, red Coral prepared, Man's Skull prepared each three Grains, Oyl of Amber one Drop. Mix and give it in a proper Vehicle.

Many commend *Aurum fulminans* and Nitre, Spirit of Linden Tree Flowers, black Cherry, Flowers of Peony, Lily Conval, Flowers of *Stachas*, Orange and the like, drawn after Fermentation are as good, and so are

Amber and Musk. All Medicines of Castor are good against an Acid, and so are Medicines made of Treacle, and Opiates, volatil Balsamicks, such as *Liquor Cornu Cervi succinatus*, are good. Or, for Sucking Children this Powder;

Take of Crabs Eyes prepared twelve Grains, Cinnabar of Antimony four Grains. Mix them. Make a Powder. Divide it into four Parts.

§. 4.

Externally also, to correct the Acid, a Plaster may be applied to the Brain, Stomach, and Navil, of Treacle, adding a little Oyl of Amber, Amber-grise, Musk; or a *Galbanum* Plaster, with the same added. The Nostrils may be anointed with Oyl of Amber or Rew; and Spirit of Sal Ammoniack, or some other volatil Spirits may be held to the Nose.

Frictions of the lower Parts must not be neglected. Blisters may be drawn behind the Ears and on the Wrists, or Cauteries may be made in the Head. But because of the Torture, I never used them.

The Head must be strengthened with Caps; *Emplastrum epilepticum Cratonis*, and *Mysficiti* must be applied to the

Crown of the Head, and
be worn Day and Night.
Stomach and Guts must
be dressed with Internals and Ex-

ternals worn about the Neck
are thought to do good.

If Fits come from Breed-
ing of Teeth or from Worms,
then such Remedies are proper
as are good for those Diseases.
Of which in their Places.

CHAP.

C H A P. VIII.

Of difficult Breeding of Teeth.

§. I.

THough some (as Histories record) are born with their Teeth; yet such Instances are rare. The Eye-Teeth, called *Canini* or *Incisores*, cut about the eighth Month they are sometimes a Year, seldom two, and very rarely three in coming. There is a true and a false Dentition. A False is nothing but a Swelling of the hind Part of the Gums into a sharp Protuberance, hindring the Child from Sucking, arising from Afflux of sharp Humors resembling the Cutting of Teeth.

The *Germen* of a Tooth in the Jaws is mucous and thin, like the White of an Egg, contained in its Cell, which Day by Day grows harder, till the Matter, being thoroughly hardned, breaks through, which perruption occasions many Symptoms to poor Infants, the chief whereof *Hippocrates* reckons up, S. 3. *Aph.* 25. When they begin to breed Teeth, troublesome Itch-

ing of the Gums, Fevers, Convulsions, and Loosness arise, especially when they breed the Eye-Teeth, and when Children are gross and coltive. The true Signs of Dentition are taken from the time (which varies much) and Occurrences about the Mouth, *viz.* if they put their Fingers or any thing else in their Mouths, when they bite the Nurses Nipple, when there is an inward Heat in the Mouth, Redness in the Cheeks and Whiteness in the Gum. Itching and Pain proceed from the Teeth velleicating the nervous Fibres, in cutting the Gum, and the sharper the Tooth is the more exquisite the Pain, which made *Hippocrates* blame the Eye-Teeth, as the Authors of worse Symptoms than any of the rest.

And this Pain is augmented by the Afflux of a sharp *Lympha* through former Pain, whereby not only the Gums, but the tender Teeth themselves may be afflicted, as in the Tooth-ach of grown Persons, *Sylvius* will have the Blood to be

extravasated and stagnate, which causes Swelling, Pain and other Symptoms.

The frequent Salivation depends upon Pain, Commotion of the Spirits, the Acrimony and Fluidity of the *Lympha*. For by Pain the Vessels of the Glands, especially the Membranes enclosing them, are usually vellited and contracted, and so comes the plentiful Effusion of *Saliva* into the Mouth. And *Saliva* is continually running down the Throat into the Stomach. If the *Saliva* be kind and natural, the Defluxion proves harmless. If it be sharp, it irritates and corrodes the Throat, and raises a dry Cough. If it fall upon the Stomach it causes Vomiting, Loss of Appetite, and many Mischiefs more. When it passes to the Guts, it likewise irritates the miliary Glands, and makes them pour out more Matter to it, which occasions a Looseness, so usual in breeding of Teeth. How Fits and Frights come may easily be gathered from what has been already said.

§. 2. Prognostick.

Denition has some Danger in it. And there is most according to *Hippocrates*, when a Child breeds its Teeth with Cough. There is good Hope, when a Tooth cuts quickly, when the Child is not diseased before, when the Symptoms are mild, especially if there be no Convulsions, but all the Sym-

ptoms vanish of themselves, like a light extinguished, or a Thorn pulled out, but if a Tooth be slow in cutting, if the Symptoms daily encrease, and when one is gone another comes, when the Child's Strength is gone, the Case proves Mortal.

§. 3. Cure.

ALL Endeavours must be used, to promote the Cutting of the Tooth, to remove all Obstacles, and to mitigate the urgent Symptoms. First of all the Belly must be kept loose if it be costive, by Clysters, or *Manna*, or Syrup of Cichory with Rhubarb or Powder of Jalap. The Gums must be anointed with *May Butter* mixt with Liquorice Powder, the Fat of a Hen, Goose, Duck, Quail, or a Hare are good, to which last and the Brains much is attributed. They commend also the Brain of a Calf or Lamb, and Oyl of white Lilies, Sweet Almonds, Chamomil, Cream, Honey of Roses, Mucilage of Seed of *Psyllium* and Line, Juice of live Crabs with Water of Blew-bottle Flowers. A peice of Bacon, Marsh-Mallow or Florentine *Iris* Root may be given Children to be constantly sucking. Some commend new Figs split and applied to the Gums. *Timeus* and others commend a Drop or two of the Blood of a Cock's Comb hot rubbed upon the Gums. *Ettmuller* has a better Remedy; namely,

namely, the Marrow of a Calfs Leg, and Oyl of Sweet Almonds applied to the Cheek, or a Bag of emollient Herbs and Flowers or only of Chamomil Flowers, or a Plaster of Treacle may be applied to the Cheek. The Women use Coral and other hard things to rub Children's Gums with, which are naught. And

I take all their Amulets to have no other Virtue, but the Imposers Imagination. It is proper sometime to lance or open the Gum, and to draw Blisters, make an Issue, and apply Leaches.

This is *Willis* his Way. If there be much Pain and want of Sleep, a Drachm or two of *Diacodium* may be given.

C H A P.

C H A P. IX.

Of Children's Cough and Asthma.

§. 1. Cause.

A Cough and *Asthma*, are two of the most troublesome Diseases to Children. They arise generally from an acid, mucilaginous Matter, fluctuating in the Stomach which contracts the pectoral Muscles serving for Inspiration, and the *Bronchia* and their Fibres likewise, whence a Cough and Hooping proceed.

§. 2.

Children also have a moist Brain, and a salt sharp Liquor always trickling down from thence, must irritate the Throat as it passes, and cause sometimes a hooping Cough, and some of it getting into the *Bronchia*, turns to an acid viscid Matter, which must also cause an *Asthma*.

§. 3. Prognostick.

Vomiting and Sneezing follow, it is good; but if Convulsions and other bad Symptoms appear, there is no Hope.

§. 4. Cure.

THE Cure consists in getting the acid, viscid Matter out of the Stomach presently,

for which purpose a Vomit gives present Relief and Ease; and in dissolving the Reliques of the acid, mucilaginous Matter by Incisers. This or the like Mixture will not be improper;

Take of Water of Hyssop, Mint, Fenil each one Ounce, *Tinctura Proprietatis* half a Drachm, Syrup of Tobacco half an Ounce. Mix, and give a Spoonful at a time. Or;

Take of *Oxymel* of Squills, Syrup of Colts-foot each one Ounce, Syrup of Radish Juice half an Ounce, *Balsamus Sulphuris anisatus* five Drops. Mix and give it to lick.

Or Juice of Radish prepared with Sugar may be given by it self or by turns. Or a little of the following Powder may be given in Milk, Broth or Pap; especially if there be an *Asthma*.

Take of *Species diatreos*, *Facula Ari* each one Drachm, Man's Skull, *Succinum Catarrhale* each one Scruple. Mix and give it.

If there be Costiveness and an *Asthma* besides, this following is good at times in Pap;

Yyy

Take

Take of Jalap one Drachm and an half, *Facula Bryonia* two Scruples, *Succinum catarrhale* one Scruple. Mix them for several Doses.

If the Cough come from a sharp *Lympha*, infecting the *Larynx*, and from a cold Air, half a Scruple or a Scruple of *Sperma Ceti* is good: Or a Spoonful of the following Mixture now and then;

Take of Water of Mint, Fenil each one Ounce, Orange Pill half an Ounce, *Spiritus Salis Ammoniaci anisatus* twelve Drops, Oyl of Mint destilled one Drop, Syrup of Colts-foot six Drachms. Mix them. A Grain or two of *Theriaca Castileis* may be put into it.

Let the Nurse take the pectoral Decoction.

In more adult Children for an *Asthma* with Wheezing *Decoction Spleneticum Myrsichti* is excellent, and Bleeding likewise, especially if the Child be above five years old.

Liquor Cornu Cervi succinatus and native Cinnabar are the best Medicines.

Crato and *Ettmuller* do in this

case commend, as a Specifick, a Decoction of Turneps sweetned with Sugar.

Among Externals the chief are Powder of Mastich, *Olibanum* or Amber applied with Flax to the Head, or a Plaster of *Ceratum peregri- bregmate usitatum*, and *Tacamahaca* each alike, mixt up with little Oyl of Mastich and applied to the Crown of the Head.

If it proceed from the too great Dilatation of the Glands of the Brain, a Fume is proper of Gum Juniper, Amber, Frankincense, Mastich, *Benzoin*, and red Roses and the Fume may be received in Cotton and applied to the Crown of the Head.

The Breast may be anointed with several pectoral Oyntments. Oyl of Sweet Almonds, *Iris*, &c.

Take of *Unguentum pectorale* half an Ounce, *Resumption* two Drachms, Oyl of Sweet Almonds three Drachms, *Sperma Ceti* half a Drachm. Ointment.

Take of Oyl of white Lily, *Iris* each two Drachms, Saffron one Scruple. Mix them.

The Soles of the Feet may be anointed with the Fat of a Pike Fish, or with Goats Suet.

C H A P. X.

Of Worms.

§. 1.

Worms spare neither Sex nor Age; but trouble Children the most. Child in the Womb is not from them; for I opened one died as soon as it was born, found a Lump of Worms in belly.

§. 2. Description.

Worms are living, long Animals, bred in several parts of the Body; but chiefly in the Stomach and Guts they are either the common, large, and round Worms, or the Maw Worms, or the broad worm, which is found in the Guts, especially in the

§. 3. Signs.

Signs of Worms in Children, are Rumbling and Pain in Guts; sometimes Want, and sometimes Excess of Appetite, so of Thirst. Shortness of Breath, a fowre stinking Breath, a short Cough accompany. The Nose itches, they are in their Sleep, they look pale and sickly in the Face, they have a blew Circle under their

Eyes, their Eyes sink, they are very Lean, at length they are troubled with a Palpitation of the Heart, Swoonings, Convulsions, and Epilepsie.

§. 4. Cause.

THE Galenists blame sometimes a putrid, sometimes the native Heat and sometimes both, as the efficient Cause. The material Cause they make to be sweet Phlegm (which putrefies) and Meats that breed it, as Cheefe and Fruit, and any thing that they do not digest, as Flesh Meat, when they suck the Breast, and sometimes Milk alone.

§. 5.

Hellmont thinks Worms are bred in the Duodenum, and not in the Stomach, but of half digested Food.

§. 6.

SPILVIUS holds, that Worms come from Cramming too much Food, especially Flesh and Fruit, because they do not ferment well, and therefore lie crude a long time in the Intestinum tenue, and by little and little corrupting, breed Worms From the Corruption of which Food,

he says, sharp Vapors arise, which dispersing themselves abroad, prick first the Guts, then the Stomach, and sometimes rising up the Throat, and so into the Nose, cause an Itching there. These Vapors are carried likewise by the lacteal Vessels to the Heart, and so cause a Fever; if to the Head, they occasion the Epilepsie and Convulsions.

§. 7.

Our Opinion is, that Worms arise not from Putrefaction; but the Reason why they are found in the Guts is this, Because Eggs which are either blown by Flies upon Meat, or Eggs bred in the Food, are often eaten with the Food, and are not destroyed in a Stomach that has little heat in it, such as Childrens is, (and *Helmont* derives Worms from a Vital Excrement) but bring forth, and so Worms are bred of the Food (but according as the Eggs of Different Flies are eaten, or as Heat is weaker, so divers sorts of Worms are bred) which finding Nutriment in the Guts, tarry there, and consume much of the Chyle, and when Chyle is wanting they gnaw the very Guts, and so by vellicating the Fibres they not only cause sharp Pains and a Fever; but I have seen the Guts have Holes eaten in them.

The Excrements of the Worms, mixing with the Child's, causes strange Fermentations whose subtil Particles, not squaring with the Pores of the Guts, cannot get through but are pent up, and so cause wind.

Hunger arises because the Worms consume the Chyle, and sharpen the Ferment of the Stomach.

Nauseousness proceeds from pituitous Humors in the Stomach of such as are troubled with Worms.

§. 8. Prognostick.

Worms discovered in time are not very dangerous; because they may easily be killed and brought away. Vermination is a tedious Disease and not being taken notice of or neglected, has killed several. Great Worms are reckoned worse than little ones, many than few, living than dead, red than white, and particoloured are worst of all; but there is no great danger in Maw-worms.

§. 9. Cure.

THE Ancients commend divers Purges and Anthelminticks inward and outward, especially things that are bitter, and have a specifick Quality. *Avernius* commends a Cataplasma *hieria picra* applied to the Belly.

§. 10.

THE Chymists commend *Mercurius Vita*, green Spirit of Vitriol, red Oyl of Vitriol, Salt of Antimony, Tincture of Sulphur, *Tartarus vitriolatus*, Vinegar of Antimony, and other things made of Mercury.

§. II.

Plinius commends Water, that has had Quick-silver shed in it, for killing of Worms in Children, if they drink it, or in Ulcers, if they be shed with it.

§. 12.

Plinius commends all things that correct and purge the Stomach, and especialy *Mercurius dulcis*. Among things that kill Worms, he reckons all bitter things, especially Zedoary, about a Scruple of the Powder at a time, taking it once a day. He also commends Spirit of Vitriol or Sulphur dropt in Wine, if they are thirsty, not otherwise.

§. 13.

OUR Method is either to kill them and then expel them, or to expel them alive or dead, to evacuate Phlegm and by Fermentation.

The chief things that kill Worms are; Roots of Grasse, Sorell, Zedoary, *Acorus*, Gentian, Tansey, Coral-wort, Angelica, tops of Wormwood, lesser Centaury, *Cardium*, Seed of St. John's Wort, Zedoary, Wormseed, *Mercurius*, Harts-horn, Antimony, Medicines of Vitriol, Juice of Limes, acid Spirits, fixt Salts, Cinabarines, Medicines of Myrrh and Aloes.

I will give you some Specimens, upon my own Experience; our golden Powder, made

of native Cinnabar, *Mercurius dulcis*, and Gold. Or;

Take of Myrrh, Zedoary, Citron Pill each half a Drachm, Cinnabar of Antimony one Scruple, Camphore half a Scruple, Oyl of Amber, Rew each one Drop. Mix them. Make a Powder. The Dose from half a Scruple to a whole one in Zedoary Water. Or;

Take of burnt Harts horn, Coral-wort each one Drachm, Gentian Root two Scruples, Myrrh half a Scruple, Oyl of Myrrh three Drops, Tansey five Drops, white Sugar one Ounce. Mix them. Make a Powder. The Dose one Scruple.

While they are taking these Anthelminticks, a Purge must now and then be given, especially a spirituous and aloetick one. The former Medicines may be taken either in some distilled Water, or in Water wherein Quick-Silver has been boyled. The following Lozenges are readily taken by Children, and are of Excellent use.

Take of Root of Gentian half a Drachm, white Agarick, Seed of Zedoary, Tansey each one Scruple, burnt Harts-horn, *Mercurius dulcis* each half a Drachm, Sugar dissolved in Gentian Water what is sufficient. Make Trochiscs or Lozenges.

Lozenges of *Diacarthami* are good, and if there be much Phlegm

Y y y 3.

Phlegm in the Stomach, a pretty strong Purge may be given;

Take of Syrup of Peach Flowers, Water of St. John's Wort, Purslain each half an Ounce, Powder of Coral-wort one Scruple. Mix and give it.

But because bitter things cannot so well be given to Children in such a Form; therefore we usually drop some *Tinctura Salutis*, or *Liquor Cornu Cervi succinatus* into their ordinary Drink; or if they be very Nice, we put some shavings of Harts-horn into it. This following is good to kill Worms, to prevent corruption of the Humors, and to keep the Body open. The Dose is between six and ten Drops in a Spoonful of Gentian or some such Water.

Take of *Elixir Vitrioli* one Drachm, Essence of Wormwood half a Drachm. Mix them. Give it as before.

Pulvis Comitum Warwicensis, or *contra Vermes. Augustan.* or *Morelli*, prescribed in his Treatise of Fevers, is good.

A Decoction of Earth Worms, washed in Wine and dried, made with Flowers of St. John's Wort and Peach, is good to bring away Worms.

If a Child will take nothing inwardly, a Clyster of Milk is good first, and then;

Take of tops of Wormwood, Tanfy, Southernwood each one Pugil, Colloquintida tied in a Rag half a Drachm, Boyl

them in Water. To about six or seven Ounces of the Colature add a little *Confectio Hamech*, Honey of Roses and Oyl of Wormwood by Decoction. Mix and give the Clyster.

Several Suppositories may be given. I have seen a Fig bring away Worms.

Among Externals several Ointments may be used;

Take of *Unguentum contra Vermes Augustanorum*, Oxes Gall inspissated each one Drachm, distilled Oyl of Wormwood Tanfy each six Drops. Mix them. Or,

Take of *Oleum Diacolocynthidos Quercetani* three Drachms, distilled Oyl of Wormwood eight Drops. Mix them. Or;

Take of Oxes Gall, Oyl of Wormwood, Mint each one Ounce and an half, bitter Almonds six Drachms, Powder of Peach Flowers two Drachms, *Aloe hepatica* six Drachms, Wax half an Ounce. Mix them. Make an Ointment. Or;

Take of live Sulphur, Soot each two Drachms, Root of Elecampane two Drachms and an half. Melt them over the Fire with May Butter, and anoint the Navil with it.

So *Unguentum de Arthanita* applied to the Navil is said to kill Worms. Or;

Take of Peach Leaves, as many as you please, bruise them, add some Oxes Gall. Make a Cataplasm and apply it to the Navel.

Ointment made of Fat and Mercury is the most effectual to kill Maw-Worms.

Here follow some Empirical ways to kill Worms.

The pastern Bone of a Cow, powdered and drunk in Wine.

Crollius commends the white Worms found in the inside of a Rose.

Dorncrellius commends a Drop of Oil of Hazel Wood *per descensum* with Bread.

Frid. Hoffmannus says, there is nothing better than Juice of Apples with Wine and Spirit of Wine for killing of Worms.

Kircher commends Worms, dried and powdered and made up

into a Plaster with Oyl, and so applied to the Stomach.

Varignana commends the drinking of a Decoction of *Stæchas* and Lentils, and Elecampane Root in Wine.

Weikardus commends the drinking of Rye and Hop Flowers boyled in Milk.

Wittrichius cuts Onions, steeps them all night in Water, and gives the Water to Children to drink.

There is scarce a better Medicine than burnt Harts-horn and Vinegar to be given Children.

Joh. Zapatha commends this following;

Take of Spring Water, or any other proper Water, one Pound, Oyl of Sulphur fifteen or twenty Drops.

Let the Child drink often of this, especially in the Night if it be thirsty.

C H A P. XI.

Of Lice, and a sore or scald Head.

§. I.

CHildren and the younger sort are most troubled with Lice; yet sometimes, though rarely, elder Persons are so too. For Histories record, that Kings and great Personages have been eaten of them.

§. 2. *Cause of Lice.*

THE Cause is very intricate. Some make it to be the filth of the third Concoction, Others, a terrestrial Portion of the *Lympha*. Others, a putrid Blood; for *Borellus* writes, that he knows some Chymists, who can of humane Blood and Sperm make Flies and Lice. Others think, the Seed of them is carried into the Body.

§. 3.

OUR Opinion is, that thousands of Seeds of Insects lie in the Milk and other Food, which not only are not rightly altered in the Stomach, but afford bad Nourishment, which makes the *Serum* thick, which stagnating a while, and not being discharged by Tran-

spiration, must needs Corrupt, and so the seminal Principles, which before lay occult and oppressed in the *Serum*, having got at Liberty, turn into living Creatures.

Serum usually offends, because Children that are Lousy, are always in a manner troubled with Kernels or Swellings of the Glands about the Neck. And every one knows, that the Glands prepare and distribute the *Serum*, the Acidity whereof causes this Disease.

§. 4. *Cause of sore Heads.*

THE Acidity of the *Serum* also occasions sore Heads and Scald, which differ according as the *Serum* is more or less Acid or Viscous and thick. Such Diseases may also proceed from the preternatural retention of the *Mecconium*.

These cutaneous Diseases and Breakings out come in Children, because many heterogeneous and vitious Particles are gathered in the Bodies of Children, because of their Voraciousness, which should be discharged by Transpiration.

§. 5. *Prog-*

§. 5. Prognostick.

Lice are a tedious Disease, sometimes contagious, like the Plague, and sometimes mortal.

Breakings-out and scald Heads, are wholesome for Children. They are a good Sign, but a bad Cause; for it were better they never came. However, they free Children from worse Diseases. They are very dangerous, when they strike in. Sometimes they corrode the Skull, and sometimes make Children bald, and run to running Ulcers.

§. 6. Cure of Lice.

Lice are prevented by a cleanly Diet, Neatness, gentle Purgings, forbearing all Cacochymick Food, especially Figs, since it is manifest, they contain abundance of such seminal Principles of Lice in them, and Flesh.

This is a good Purge for a Child of five or six years Old;

Take of Powder of Jalap seven Grains, *Mercurius dulcis* three Grains, *Antimonium diaphoreticum* two Grains, Syrup of Roses Solutive, what you please. Mix, and give it.

A Pill or two of Aloes, now and then is good, for Aloes, Antimonial, Mercurial, Acid, Sharp, Ponderous, and Bitter Medicines are good.

Garlick is good. And so is a Decoction of the Woods drunk for the ordinary drink.

Among Externals, Oyntments and Decoctions of Quick-silver are much valued, or *aqua Hermetica*,

or the Cloth wherewith Gold-Smiths wipe gilded things, applied to the Head. But we must have a care how we meddle with Mercury. It were better to wash the Head with water of Aloes, and then to apply a Plaster of Garlick. Or the Head may be washed with Spirit of Wine, in which Staves-acre, and Bay-berries have been infused, or with Spirit of Lavender. Or mix some *cocculi Indi* with juice of Tobacco and Hogs Lard, and anoynt the Head. Or wash with juice of Tobacco, or of Meadow-Saffron. *Foubertus* commends this following;

Take of Ashes of Leeches one Ounce, *Syrax liquidus* half an Ounce, Swines Blood, Wax, each what is sufficient. Mix them. Make an Unguent.

Camphore and Civet are good for an Amulet.

§. 7. Cure of a sore Head.

FOR the Cure of a sore Head, Hydragogues, especially Jalap and *Mercurius dulcis*, are good. All volatil Alkalies are good to take off the acid and viscid Acrimony. I value Viperines. For you cannot imagine what good a few Grains of the Fat of Vipers given in Conserve of Speedwel, does, by causing Sweat. Tincture of Antimony and other Antimoniates are good to promote this Transpiration: for instance;

Take

Take of Harts-horn prepared without Fire, *Anthonium diaporeticum*, Crab's Eyes each one Scruple, Myrrh half a Scruple. Mix them. Give a Scruple of this Powder, and repeat it.

A Decoction of Wood of *Gujacum* or *Sassafras*, Elecampane, Soapwort, Dock, &c. may serve for Drink.

So essence of Fumitory, *Sassafras*, and other things that correct the Serum, are good, such as Syrup of Fumitory or Birch juice, which expels much, and Syrup of Elecampane.

Shavings of Harts-horn, Flowers of Fumitory, Columbine and Scabious may be infused in Beer.

If it come from the Nurse, let her take *Pilule de fumaria*, and Whey, with the juice or essence of Fumitory.

Lotions and Oyntments must not be used presently; but give Purgers and Expellers a while, and then use Externals. This is a good Liniment;

Take of Oyntment of Elecampane one Ounce, *Saccharum Saturni*, Camphore, Sulphur each one Drachm, Salt of Tartar half a Drachm. Mix them.

Take of Hog's Lard two Ounces, Sulphur vive half a Drachm, juice of Limons one Drachm. Mix them.

These Oyntments make the Pustules dry away and fall off.

Cranes-Bill fried in Butter, and strained through a Linen-cloth,

anoynted all over the Head, to my knowledge, is a good Medicine.

If the Sores are Malignant, Spreading, and come from a sharp Acid, the following Liniment will be proper;

Take of *lapis Calaminaris* two Drachms, Meal mixt with Vinegar or Wine, Refin, what you please. Make them up into a Liniment, and anoynt the Sores.

If the Sores run a thin and sharp Sanies, wash them with Frogspawn-Water, strew on Powders that imbibe an Acid, and dissolve a Viscid, that dry and deterge, such as Chalk, Amber, burnt Harts-horn, *lapis Calaminaris*, Cerufs, Myrrh, Flower of Brimstone, *crocus Martis*, &c.

To promote Consolidation, in the end of the Cure we may give *essentia traumatica* with essence of the Woods, and Powder of Man's skull prepared, with Crab's Eyes prepared.

If the Pustules are radicated, *oleum Sulphuris per deliquum* mixt with Oyl of sweet Almonds, is good to anoynt them.

In a Scald, the Head may be washed with a Decoction of Willow, Pellitory, white Blite and Lentils; then anoynt with Bayrus his Oyntment, which I highly value;

Take of Sulphur, Seed of Pellitory each half a Drachm, Soapwort one Ounce. Mix them with juice of Pellitory, and make an Oyntment.

This

This also is a good one of *Jo-*
annes Cekkius;

Take of Powder of Bryony, Roses,
Pigeons Dung, green Sulphur
each two Drachms, Blood of a
Tortoise, juice of Bete each one
Ounce, Saffron eight Grains,
Oyl of Juniper, Bays each half
an Ounce. Mix them in a Lea-
den Mortar.

Take of Litharge one Pound,
Strong Vinegar what is sufficient.
Boyl them in a Brasse-Vessel two
hours. Pour the Colature into a
large glasse Body. Pour upon
it by little and little *oleum tar-*
tari per deliquium what is suffi-
cient. Take the Powder that
is precipitated, and strew it on
the Scald.

CHAP.

C H A P. XII.

Of Children's Consumption.

§. I.

Children's Consumption is called *Atrophia*, *Macies puerorum*, *tabes dorsalis*, *Febris hectica*, and *Phthisis*.

Description.

IT is, a Preternatural wasting of the whole Body and the Parts, through Nutrition being frustrated in Children, arising commonly from an acid and viscid Mucus, obstructing the Orifices and Passages, of the lacteal Vessels, and consequently stuffing the Mesaraick Glands, seldom from the decay of the Viscera, often from the Worms called *Comedones*. A Swelling of the Abdomen generally accompanies this Disease; for in as many as I opened, that died of this Disease, I found the Glands of the Mesentery swelled and obstructed, whereby the parts were deprived of their Nourishment, the passage of it being obstructed, so that the Parts must needs waste, the Blood likewise turning Sharp, and so unfit for Nutrition.

The Dyscrasie of the Nurses Milk and a bad food does the Child much harm. And the sharp and saline Particles are unfit for Nutrition, which by their corrosive quality do often, like a Chymical *Menstruum*, dissolve and put the Blood in Fusion; and destroy its balsamick Particles; which Union being dissolved, many Particles are discharged insensibly and sensibly by the Pores of the Skin, and other Emunctories, as colligative Sweats, Oily Urine, and Loosness do testify, so that, these things coming, the Parts must needs be deprived of their due Nutrition.

Beside these things, sometimes through a peculiar Pravity and Corruption of Nutriment, Worms lie under Children's skins, which they call *Crinones*, *Dracunculi*, and *Comedones*. The Cause of them is hindrance of Transpiration, and a Stagnation and Corruption of Serum thereupon, and then a Production of occult Seeds. In this case also there is a great Acrimony and Viscidity of the *Lympha*, so Nutrition is frustrated, the Child cries continually, never Sleeps, and withers like a stick. Many Physicians will not believe, that these are true living Animals, but only viscid

cous

ous Excrements in the shape of Animals. But now it is apparent by the help of Microscopes, as *Exmuller* and I have both of us observed, that they are true and living animals, of an ash colour, with two prominent Horns, round goggle Eyes, and a long hairy tail, horrid to look on.

§. 2.

Children in this Disease eat much and greedily, but do not thrive. The *Comedones* cause an Itching, and irritate the Membranes, which breaks Children of their rest, and makes them cry continually, and then they begin to waste and consume.

§. 3. Prognostick.

A Hippocratical Face is bad. Consumptions, that come from Inflammations, Exulcerations, Swellings, and Obstructions of the Mesentery, are dangerous. If they were born with an obstructed Mesentery, no art can cure them; if viscid Phlegm be the Cause, something may be done by proper means. If the Lungs are ulcerated, there is no Cure.

Convulsions in Consumptive Children are certain Signs of Death. When Sleep does not refresh, the case is bad.

Colliquative Sweats, Looseness, voiding of fatty Matter, by Stool and Urine are ill Signs.

If it come from *Comedones*, it is easily cured, unless it be inveterate.

§. 4. Cure.

THE Cure consists in opening a passage for the Nutriment, which, if the obstruction come from a viscid Matter, we may do by Volatils, and other Aperients, and by gentle Purgers. We may therefore give Damask-Prunes, stewed or boyled with Aperients. While they suck, Syrup of Roses Solutive may be given; but when they are weaned, they can bear no mucid thing, therefore we must forbear Syrups. *Tartarus vitriolatus*, made *Tachenius* his way, might better be given, or *arcanum duplicatum Mynsichti*: The Dose is as many Grains as the Child is years old. *Tinctura Martis vitriolata* might also do well, two drops for every year the Child is old.

If an Acid also and an Austere do both offend, and contract the Vessels, so that no Nutriment can pass, Crab's Eyes, and terrene things are good, which correct the acid Acrimony of Heterogeneous Salts. I have known several weaned Children cured with the following mixture;

Take of Water of Primrose, Crabs, lesser Centaury, *Antihæstica Schroderi* each one Ounce, Shavings of Ivory, Harts-horn prepared, Crabs Eyes prepared each one Scruple, red Coral prepared half a Drachm *tartarus vitriolatus* one Scruple, *Fulapium Rosatum* fix Drachms, or an Ounce. Mix them. Give every day two spoonfuls twice a day.

I also value the following Lozenges, because Children will willingly take them;

Take of *Sal Cachecticus Martis Shroderi*, Crab's Eyes each half a Scruple, *tartarus vitriolatus* fifteen Grains, *lapis Prunellæ* six Grains, *species diarrhodon Abbatis* half a Scruple, white Sugar one Ounce or two. Make Lozenges according to Art.

Some do wonderfully commend *Antibecticum Poterii*, *Saccharum Saturni*, Medicines of Myrrh, Antimony, and the like. I lately cured a Child of my own of such a Colliquation by this Medicine following. It had always a Cough after Feeding;

Take of Water of Mint one Ounce, Citron pill half an Ounce, Spirit of Sal Ammoniack ten drops, Salt of Wormwood five Grains, Oyl of Mint one drop, Syrup of Fenil six Drachms. Mix them, and give a spoonful at a time.

The elder Children may go into a Milk Diet, and use the things prescribed in *Book 3. Chap. of the Hectick Fever*.

Water of tree Ivy, or half a Drachm of the Powder in Water of the same is an excellent Medicine, given several times. The Belly may be anointed Morning and Evening with Capon's Grease.

Among Externals, for sweetning the Mass of Blood, Baths and Fomentations of Milk, and of a Decoction of a Sheep's head and Feet,

which must be boyled till the Flesh will slip from the Bones, and emollient Herbs may be added, root of Marsh-Mallow, leaves of the same, tree Ivy, Fern, Mallow, Violet, Purslane, St. Johns wort, Bugloss with the Root, Flowers of Chamomil.

For dissolving the thick Mucilage, when there is a swelling also of the *Abdomen*, *Sylvius* his Oyntment made of *Unguentum Martiatum*, *Dialtheæ*, and *oleum Philosophorum*, will be proper. Or;

Take of Oyl of Capers, Wormwood, elder each one Ounce, *Unguentum de succis aperitivis* an Ounce and an half, Gum Ammoniack dissolved in Vinegar half an Ounce. Make a Liniment.

Melilot Plaster may be applied to the *Hypochondria*.

The Grease that is found about the Iron spindle of a Mill-wheel, which has been greased, is good to anoynt with all, also a little fresh Butter, Hog's Lard, Sheep's Suet, and a little Oyl of Wax melted together is good.

If there be colliquative Sweats, *tinctura Antiphthisica*, all Saturnine and Aluminous Medicines give relief.

§. 5. Cure of Worms.

TO cure the *Comedones*, which Cause a *tabes dorsalis*, after the tincture of Antimony, it is good to bathe in fresh Water, with a little Honey in it, the sweetness whereof entices the Worms, and they put their Heads out of the Pores

Pores of the Skin, and then either with the Nails, with a Knife, or Razor, they may be taken off. Or the Women's way may be used, who anoint Children's backs with Honey, which makes the Worms put out their Heads, and so they are cut off with a Razor.

For killing of them *Timeus* commends water of Aloes, to wash the back withal every day. Chasing the Body, with water of

Honey and Meal, is good, which may be scraped off with a Razor, and so the Worms may be got out.

Ettmuller and I are convinced by experience; that a Decoction of Quick-silver is the best, to wash the Child withal in a Bath: for it kills the *Comedones*. You must also give *Antihecticks* and *Anthelminticks*, mentioned before.

CHAP.

C H A P. XIII.

Of the Rickets.

§. 1.

THE Rickets is, *When through an unequal distribution of the Nutritious juice, for want of it in one place, and too much of it in another, one part wasts away, and another grows over big.*

§. 2. *Signs.*

THE Phenomena of this Disease are a very great head, and here and there divers great Protuberances in it, a wit beyond the Child's Age, swelling of the *Abdomen*, Ittraitness of Breast, sticking out of the *Cartilago Ensi-formis*, the Back and Bones crooked, big about the Joints, littlefness to stir, they must sit when they play, their back can scarce bear their head, there is shortness of Breath, a Loosness, and a weakness in all the Parts. Sometimes they grow Consumptive, have big Bel-lies, a Cough, and the like Symptoms.

§. 3. *Cause.*

THEY that write of the Rickets, make the Cause to consist in the obstruction of the spinal Marrow and Nerves, and in the defect of the nervous Influx

depending thereupon. The Serum is also in fault, because the Glands of the Mesentery are obstructed, which makes the Belly to swell.

§. 4. *Prognostick.*

THIS Disease seldom proves mortal, unless through the violence of its Symptoms it turn to a Consumption, Dropsie or some other Disease. They that are not cured, before they are five years old, are sickly all their Life after. The longer the Rickets is coming after the Birth, if it follow a Fever, if the Itch supervene, and the Symptoms abate, the more hope there is. If the Lungs are naught, and the Breast so Ittrait, that they have not room to play, but cause an *Asthma*, and difficulty of Breathing, it is incurable. Adult Persons are not troubled with it, because their Head and Bones are come to their full growth.

§. 5. *Cure.*

THE Cure of the Rickets consists in the removing the viscid Matter, that causes the obstruction of the Nerves and spinal Marrow. The Cure must be begun with Purging. This is *Sydenham's* Method;

Take of Tamarinds half an Ounce, leaves of Senna two Drachms, Rhubarb one Drachm and an half. Boyl them in a sufficient quantity of Water. In three Ounces of the Colature dissolve of Manna and Syrup of Roses solutive each one Ounce. Mix them, make a Potion. Let the Child, according to its Age, take a spoonful or two every other Morning for nine days.

But the Purge must be so ordered, as not to give above five or six Stools a day. Then he uses to paint the Belly with the following opening Oyntment, continuing it several days;

Take of Oyl of white Lily, Tamarisk each two Ounces, juice of Briony root, Parsly each one Ounce. Boyl them till the juices be consumed, adding of *Unguentum Dialtheae* and fresh Butter each one Ounce, Gum Ammoniack dissolved in Vinegar half an Ounce, yellow Wax what is sufficient. Make a Liniment.

I have cured several by this Method. I Purge the Elder with Soap, and give our *Unguentum* of *Osmunda* inwardly, and use it outwardly, Anointing the back and joynts with it. To such as are very tender such a Clyster may be given;

Take twenty or thirty *Millepedes* washed in Wine and bruised, pour to them of Possiet-drink made with white Wine five Ounces. Strain it, and dissolve

in it of brown Sugar one Ounce and an half.

A Clyster may be sharpened with Salt of Tartar or some lixivial Salt, to dissolve the viscid stuff sticking in the Guts.

The Woods and their Barks, root and leaves of *Osmunda regalis*, Flowers of Spike, all opening roots, all cephalick Herbs, especially *Thea*, all Antiscorbuticks, and things full of volatil Salt, such as *Millepedes*, Earthworms, &c. are accounted specifick Alterers.

Among Chymical things the most famous is the Illustrious Boy's invention, called *Ens Veneris*, which is made of Sal Ammoniack and *Colcothar* edulcorated, and twice or thrice sublimed. The Dose is from three Grains to six, in some proper Liquor, at the time of Sleep. All Ammoniacal Medicines, by reason of their tenpity of Parts, are good to remove Obstructions, the efficient of this Disease. *Mayow* commends this following Ammoniacal Salt.

Take of volatil Salt of Harts-horn, Blood or Wine a sufficient quantity, put them into a Viol with a long Neck. Drop to them some rectified Spirit of Salt, or Sulphur *per campanam* rectified, drop by drop, till there is no more Ebullition. Let this dissolved Salt be passed through a Filtre, and evaporated over a gentle Fire, till it is dry. The Dose is from three Grains to six, first in the Morning and last at Night, in a convenient Vehicle.

In the Elder sort, if the *Viscera* be firm, and sound, Chalybeates, Vitriolates, Tartarizates, Castorines and Cinnabarines do the business.

Take of *Osmunda regalis* one Drachm and an half, Male Peony, Citrine Sanders, Cresses Seed each one Scruple, the yellow part of Orange peel Candied three Drachms, Sugar dissolved in *Osmunda regalis*, Water what is sufficient. Make Lozenges of a Drachm weight a piece.

The Child may take half a Drachm or a Drachm twice a day, drinking some of *Mayow's* Water after it. This is it;

Take of root of *Aron*, Male Peony, *Osmunda regalis* or Male Fern each four Ounces, leaves of Sage, Betony, Water-cresses, Brook-lime, Speedwel, Liverwort Firr-tops each three handfuls, green Walnuts half a Pound, *Millepedes* washed three Ounces, Castor one Drachm. When they are cut and bruised, add of white Wine Posset-drink three Quarts, draw it off in a common Still, and put all the Water together. The Dose is an Ounce or two twice a day.

Our Oyntment, which we use inwardly and outwardly is this;

Take of green *Osmunda regalis* six handfuls, red Sage, Pimpernel each one handful, Fay leaves, Majoran, Rosemary each one handful and an half, juice of Motherwort, Brooklime, Water-

Cresses, Buck-bean each one Ounce, Juniper Berries one Ounce. Shred them small and bruise them well in a wooden or marble Mortar, with five Pounds of May Butter not Salted. Let them stand fourteen days. Melt it gently in *Balnea Mariae*, and when it begins to ferment, strain it out, and keep the Oyntment for use.

The drink may be a Decoction of root of *Osmund* royal, Male Fern, Sage or Betony, made like Thea, or Thea it self, sweetned with Sugar-Candy.

Some bleed, scarifie, apply Leeches, Blisters, and Issues. Rubbing the Spine and Muscular parts the hollow and not the prominent part of the Bones, with hot woollen Clothes is good. Swinging, Rolling and Exercise are good.

To keep the spine upright, Whale bone or Steel-bodies may be made, or other Chirurgical Instruments.

There was a Man, who got much Money by setting Children straight. His way was this. He had a Pendulous Instrument, so made of swathing Bands, that one Swath went about the Breast, under the Armpits; another went about the Head under the Chin, and there were two handles for the two hands. And the Body was thus held up, till it was brought into due shape.

Fomentations are good, applied to the spine and debilitated Parts. This following is good;

Take of root of *Osmunda regalis* or Male Fern three Ounces, leaves of Betony, Sage, Rosemary, Majoran,

Majoran, Water-Cresses each one handful, Flowers of Chamomil, Melilot, Elder each one Pugil, Berries of Juniper, Bayes each half an Ounce. Boyl them in a sufficient quantity of Spring Water to a Quart. Add a Pint of Wine or Brandy. Keep the Colature for use.

I have found the good effect of Snow's Oyntment;

Take of leaves of Elder, Bay, Majoran, Sage, Rosemary, Betony, tops of Lavander each two handfuls, Berries of Juniper, Bay each one Ounce. Cut and bruise them. Put them in a proper Vessel with three pound of May

Butter, or fresh Butter, never salted, and half a Pint of *Aqua vite*. Boyl them gently, to the Consumption of the Water. To the expression, while it is hot, add of Oyl of Nutmeg by expression half an Ounce, B of Peru one Drachm. Mix t. Make an Unguent.

Instead of May Butter you may take Ox's Marrow, Deep's Sall, Oyl of Worms or Fox.

Hot Baths, Natural or Artificial, are good. The Symptoms may be cured, as directed in their proper Chapters. But divers Nervines must be applied to the Spine especially, such as we have already mentioned.

C H A P.

Z Z Z Z

C H A P. XIV.

Of Gallings.

§. 1.

Galling is cutaneous Ulcers or excoriations between the Thighs, arising from a saline Acrimony.

§. 2. *Diagnostick.*

IT is not hard to know, because the Parts affected look red and angry; if they be touched or washed, the Child shrieks out lamentably, and so expresses the Pain.

§. 3. *Cause.*

FOR the most part Gallings comes from a salt Acrimony, whencesoever that comes, though from without; whether from foul linen, or from the Part's being continually wet with the Urine, and not kept from it. For thus the tender *Epidermis* is so softned and relaxed, that by degrees it is quite eroded and separated. If the Child be very Fat, and often exposed to the cold Air, insensible Transpiration is hindered, which multiplies

a sharp Serum, and may contribute to the Gallings.

§. 4. *Prognostick.*

THis Gallings, if it be neglected, may degenerate into worse Ulcers.

§. 5. *Cure.*

IN the Cure cleanliness must be observed; the Clouts must be clean and smooth, well washed from the saline filth, and dried; or rather sappy wool may be applied to the fore part.

The good Women tie Powder of Cerus and *lapis calaminaris* in a rag, and so pounce it on the part. Some commend *crocus Martis ex vitriolo precipitato*. *Ettmuller* commends *terra vitrioli dulcis* or Powder of Chalk, Harts-horn and a little Cerus, to apply to the part, when it has lost the Cuticle.

But the best and most effectual way is to wash the Groin twice a day with warm Water, or with Rose and Plantain Water.

C H A P. XV.

Of the Stone, Stoppage and Incontinence of Urine.

§. 1.

SToppage of Urine comes in Children not only from the Stone, but from viscous Matter, stopping the passages; yet Children are troubled with the Stone, as one may see sometimes three days after they are Born, when the Clouts have often red Gravel in them. When they are a little Elder, such a sediment is oft observed in the Urine. And this gross sediment may be occasioned by the Milk, gross Food, or by a hereditary disposition.

§. 2.

Incontinence of Urine is familiar to Children, by reason of the imbecillity and resolution of the *Sphincter* Muscle of the Bladder, because of the serous Intemperature in Children, which often makes it habitual and customary.

§. 3. *Care of Stoppage of Urine.*

SToppage of Urine is cured by internal and external means, and in Children respect must always be had to the Mucilaginous acid Matter, which must be dissolved. If there be Stones, they must be expelled by gentle means. We therefore give a Scruple of white Amber very finely powdered, mixt with Powder of Crab's Eyes, or Goat's Blood in Milk or Parsly Water, or Birch Water. For the elder sort a decoction of the root of Parsly, Rest-harrow, *Asparagus*, Fenil, Butcher's Broom, &c. will be proper. For Children that are Weaned, *Joel* commends three drops of Spirit of Vitriol in good Wine.

In Spring time juice of Birch is good.

Baths and Oyntments are good. Artificial Baths may be made of root of Rest-harrow, leaves of Marsh-Mallow, Mallow, Flowers of Chamomil, &c. After Bathing, the region of the Bladder, and sometimes of the Back may be Anointed with Oyl of Scorpions or white Lily;

Lily; or a Cataplasim of bruised Chervil and Oyl of Chamomil, &c. may be applied to the *Pubes*.

If the Belly be bound, Clysters and Suppositories are good.

Divers things may be given the Nurse, as a Decoction of Rest-harrow root.

When there is a Dysfury or Strangury with it, a spoonful or two of the following or some such mixture may be given,

Take of Water of Parsly, Rest-harrow, Fenil each one Ounce, *Spiritus nitri dulcis* half a Scruple, *Syrupus dialthæ Fernelii* six Drachms. Mix them.

§. 4. Cure of Incontinence of Water.

IN Incontinence of Water, among other things, *Joël's* Powder is good, about half a Scruple or a Scruple of it in Oak leaf Water.

Take of the Stones of a Hare dried one Drachm, the Crop of a Cock burnt, the Bladder of a Hog burnt each half a Drachm, Acorns two Scruples, Seed of Rue, leaves of Nep each one Scruple. Mix them. Make a Powder for use.

You may see more, where we have professedly treated of this Subject.

C H A P. XVI.

Of Agues and Fevers in Children.

§. I.

WE will now consider the Agues and Fevers of Infants, which often take them away; and therefore do well deserve our consideration.

§. 2. Cause.

These continual Fevers are generally slow, as proceeding from a viscid Acid, wherewith Children abound. Sometimes there are periodical continuals, when in sucking Children the Milk is curdled by an Acid, whence proceed obstructions, which afford Matter, for a febrile Ferment, then this Ferment gets out of its receptacle at certain times into the Blood, and there disturbs its mixture, whence periodical Fevers and sometimes Agues arise. And if this disturbance and secretion of Blood be violent, the Fever proves Malignant, and appears sometimes with spots, sometimes without. But certain it is, that all Fevers, and especially Agues have their rise from the internal Corruption of Milk, or from the external obstruction of the pores of the Skin. For thereby the perfection of digestion is hindered and spoiled, and since this error cannot be corrected in the second digestion, the Blood must needs be disturbed, and a febrile Effervescence arise in such tender Bodies.

§. 3. Cure.

Agues, though they seldom afflict Children, yet they are easily cured; Quotidians and Tertians by Vomits, I wish we had safer and gentler means! In this case therefore a little of the emetick Syrup may be given in Mint or Fenil Water, at several times. But we must have a care of Antimoniates. The safest way therefore is to purge, which evacuates the same Matter another way. You may therefore give a Potion of Senna, Rhubarb and other things by spoonfuls. I have often prevented the Fit and cured an Ague by giving a Clyster before the Fit came. These things premised, we may betake our selves to alteratives, and in Children's Agues, I would above all things commend Spirit of Sal Ammoniack, or instead of it the fixt Salts of Herbs; *carduus benedictus*, Wormwood, lesser Centaury, &c. or *arcanum duplicatum Mynsichti*, mixt with Crab's Eyes. Camphore may be hang'd about the Neck. External topical Medicines should not be neglected. A febrifuge Plaster may be applied to the Wrists, or Horse-Radish and other things may be laid to the soles of the Feet.

As for the continual Fevers, the foresaid Purges and Clysters are good in them; after which, Spirit of Sal Ammoniack does the business, especially in catarrhal Fevers, coming

coming from an acid Lympha, and so will *Spiritus salis Ammoniaci*, *Anisatus*, and *liquor cornu cervi succinatus*. In these catarrhal Fevers, I prefer tincture of Myrrh before all other Febrifuges. Absorbents also must not be neglected of which *pulvis febrilis Ludovicianus* is one of the best; or this following;

Take of Powder of Crab's Eyes twelve Grains, Cinnabar of Antimony four Grains. Mix them. Make a Powder. Divide it into four equal parts.

For such as are weaned *liquor tartari*, or *salis Ammoniaci cum oculis cancerorum juncti*, is best.

If the Fever be burning and the Child be thirly, it is good at first to give a Vomit or a Purge, to get the viscid Matter out of the first ways, and then to give often a Spoonful of the following or some such mixture;

Take of Water of *carduus benedictus*, *Scorzonera* each one Ounce and an half, *Antimonium Diaphoreticum* one Scruple, Harts-horn prepared without

Fire half a Drachm, Sugar-candy what is sufficient. Mix them for the ordinary drink.

Or a Decoction of Harts-horn may be given. *Ettmuller* commends Horse dung tied in a Cloth and steeped in the ordinary drink.

For the elder sort, *nitrum Ammoniatum*, *arcantum duplicatum* and divers acid Juleps are proper for instance;

Take of Water of Sorel, *Scorzonera* each two Ounces, *tinctura corroborans*, or tincture of Cordial Flowers or of Daisie one Drachm, *Syrupus acetosirapi citri*, what will make it pleasant. Mix them.

Spaw Waters or *lapis prunellae* in Whey may be given to such as are strong.

If malignity be feared, and the mixture of Blood be much disturbed, then beside the aforesaid things Mixtures made of bezoardick and theriacal Medicines are proper, as of *diascordium*, *theriaca celestia*, *electuarium de ovo* and such things which you may find before in our Book of Fevers.

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